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of The AMERICAN DIETETIC ASSOCIATION

JULY 1961 VOLUME 39 NUMBER 1

Continuing Professional Growth
Margaret L. Ross

The Dietetic Internship
Wilma F. Robinson

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Listening Is Your Job!
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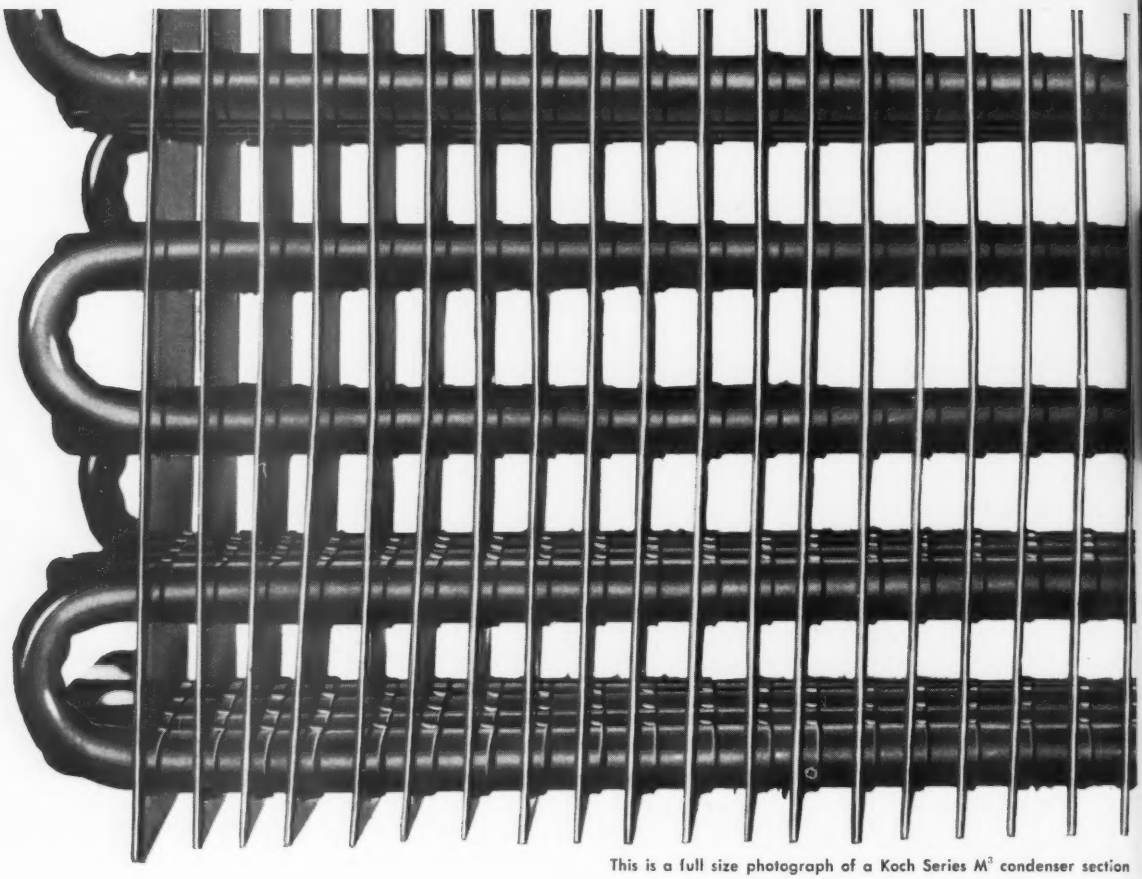
Dietary Staffing Practices
Mary K. Bloetjes et al.

Nursing Tests
Mary Shields

44th A.D.A. Annual Meeting
St. Louis—October 24 to 27, 1961



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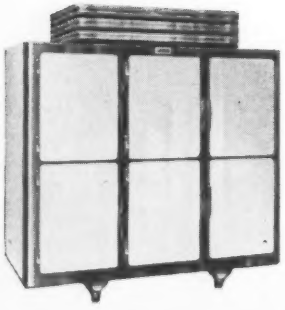

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Subscription Rates: $8 per year in advance in the U.S., Canada, and countries of the Postal Union; all other countries, $9 per year in advance. Special rate to undergraduate students and dietetic interns in approved internships, $4 per year in advance. All correspondence concerning Journal subscriptions, orders for copies, or reprints from the Journal, and notices of change of address should be sent to The American Dietetic Association, 620 North Michigan Avenue, Chicago 11, Illinois. Notices regarding change of address should reach the publisher by the *5th of the month before the date of issue* on which the change is to take effect and both old and new addresses *must* be given. Claims for Journals lost in the mail will not be entertained more than six months after the date of the issue involved.

Editorial Correspondence: All articles and notices for publication, general correspondence, and inquiries should be sent to the Editor at The American Dietetic Association, 620 North Michigan Avenue, Chicago 11, Illinois. Manuscripts are accepted for publication on condition that they are contributed solely to the Journal. Copy must be typewritten, double-spaced, and two copies, an original and one carbon, submitted.

Advertising: All correspondence concerning advertising should be addressed to The American Dietetic Association, 620 North Michigan Avenue, Chicago 11, Illinois.

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Continuing Professional Growth[1]

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THE WORLD TODAY is in the midst of much confusion and controversy. Historians may well document the decades of the mid-twentieth century—the forties, the fifties, and the sixties—as decades of sociologic revolution. We all know the impact of the industrial revolution on people and on professions. But living in the midst of a sociologic revolution—*if* we are, and I *believe* we are—is disturbing and confusing and makes us all apprehensive.

We, in dietetics, are faced with problems that are as threatening to us professionally as revolutionary movements of governments are threatening to our national status and welfare. As citizens of the United States we hear, via the media of mass communication, serious questions being raised about the strength and the stature of our nation. In similar manner, we hear questions about the ability of dietitians to handle the problems and responsibilities of administrative and/or therapeutic dietetics.

The challenge to dietitians and nutritionists in this uneasy period in world history is that they are members of a profession that is dedicated to serving the *needs* not the *fear* of the world. If the profession of dietetics is to meet the challenges it faces and is to cope with them, the individual members of the profession must be intellectually and emotionally prepared to accept their obligations of service.

We are fortunate that the founders of our Association set high standards for the profession and that the leaders through the years have continued and are continuing to build on these standards. The requirements for membership in The American Dietetic Association, which bring to the individual dietitian professional status and recognition, are rigid. However, these membership standards are of value to the profession only to the extent that the individual member accepts them as the minimum standards for professional identification, a base from which to extend, from which to reach out. Only as each dietitian extends his or her knowledge, adjusts to the social scene, and adapts to changes will the profession grow and the status of the individual be enhanced.

The faculties of dietetic internships are in a unique position to further the growth of our profession. Theirs is the task and the privilege of serving the needs of the future by molding and shaping the dietitians of tomorrow. Theirs is a work of creativity. As "only God can make a tree," so only they can make a dietitian.

Our Concern for the Future

And what shall be the shape or mold or nature of this dietitian? She will be prepared to recognize and respect the obligations of the profession. She will be dedicated to the service of others and will have a keen sense of personal responsibility. Despite the trend in the world today to try to get everything out of life that one possibly can while putting forth as little of oneself as possible, the dietitian you prepare will have learned by precept and by experience that only by giving generously of one's time, energy, and intellectual capacity—of one's whole self—does one gain. She will know that this gain is in competence, character, courage, strength, wisdom, self-realization, and enhancement of the profession.

For any profession to grow, it must be concerned with the future. As Dr. John Millis, President of Western Reserve University, has said (1): "Only as the future is intelligently understood are we prepared to meet the changes demanded by the present which the future becomes overnight." Our Association is concerned with the future and in planning and preparing for it. The establishment of approved dietetic internships—their development and expansion—has been a major project of the Association over the years. The efforts and energies of many dedicated dietitians have been devoted to planning and organizing, revising and reorganizing educational curricula and realistic experiences for dietetic interns so that they may be prepared ad-

[1]Presented at the Conference of Directors and Staffs of Approved Dietetic Internships in Cleveland, on October 15, 1960.

equately to assume the responsibilities of professional dietitians.

But, as I mentioned earlier, these are troubled times. The world scene is changing rapidly. What was good and adequate yesterday may not meet the needs of tomorrow, or of next week, or of next month, and in many instances certainly will not meet the challenges of next year. The changes and advances in science and technology are rapid, and they affect every aspect of human life. We are living in the age of speed—and our profession must keep abreast of the changes. No profession can afford to stand still, or it will cease to exist.

And what are some of the responsibilities of those who are molding this dietitian of tomorrow? In thinking of the profession for tomorrow, we must provide those experiences for the dietetic intern that will prepare her for the challenges of change. As I see it, one of the ways to accomplish this is to expose the intern to situations in the internship in which she must think for herself, where she has had the intellectual stimulation and privilege of solving problem situations herself and not by always being told what to do.

One of the changes in the social scene today has occurred in the colleges. Competition for college entrance is great. Collegiate curricula are more rigorous than they were twenty—even ten—years ago. The college graduate of today has been a winner in the race for an education. Actually in the college today, it is a case of only the intellectually fit surviving and winning the prize, the baccalaureate degree.

The Care and Nurture of Interns

These young graduates who enter internships must then be challenged and stimulated. Unfortunately, however, they are sometimes bored. This—to have even *one* intern, one prospective dietitian, bored—our profession cannot afford.

To challenge and stimulate continually these young pre-professional persons is not easy, but I submit to you that it can be fun and that it is rewarding. We heard in 1959 at the Annual Meeting that we can teach people, but we cannot "learn" people. They must learn for themselves. So, too, we can stimulate and inspire people, but we cannot "grow" people professionally. They must grow themselves. Just as we must fertilize and nurture seedlings of various plants in different ways and by different means if we are to have a flourishing garden, so, too, we must teach and nurture each individual intern and group of interns in different ways, if we are to have a growing profession. The teacher who settles comfortably into the habit of lecturing year after year from the same old set of notes, not keeping up with the changes in the subject matter area fails in his teaching and eventually may even have no class at all!

By stating all this, I am not implying that our internship programs have become chained to the rocking chair of habit. I am, however, suggesting that we must continually examine and re-examine them to be sure that no hint of tradition and ease of habit set in as a substitute for the challenge and rigorousness of change.

Creative Opportunities

You, in the internships, have a wonderful opportunity to become creative, to break the curriculum pattern, and to provide exciting and inspiring experiences for the interns in your individual communities. The young college graduates who enter your programs are eager to learn. They have come to you with the background of fundamental knowledge that is required for the profession they wish to enter. They are ready to use it, to apply it, to make it meaningful in their internship, the period of preparation for their chosen profession.

We must remember that the internship is their orientation to professional life. So, in addition to the instruction, study, and practical experience by which they will develop competence, discover their professional strengths, learn to accept responsibility and the authority that goes with responsibility, they need orientation and preparation for their roles in the growth of the profession.

Dietitians need to continue to read widely and critically, to indulge in creative listening, and to participate in creative discussion. To the extent that members of a professional group or organization indulge and participate in these three activities, the profession will grow. Keeping abreast of the changes and advances in the disciplines, arts, and sciences related to any profession is an obligation of all persons identified with the profession. This can be accomplished by reading; by thinking and mulling over what has been read, what has been written by others; by assessing and analyzing the material; and after due consideration and criticism, by accepting that which is meaningful and then applying effectively the newly acquired ideas.

Creative Listening

The power of creative listening is another ability we should seek to develop and cultivate in those we are preparing for our profession. This is an art and a skill that is most difficult to acquire and to practice. But, to me, it is one of the greatest attributes that the professional person can hope to possess. The true leader has this ability. I suggest that we all take time to stop and listen more than we do, that we teach our students to pause and listen more than they do. In this jet age, this, too, is difficult. In this troubled world, this is not easy. But, if we humans would listen creatively—not with minds set, not with semantic barriers, but with open, creative minds—we all would be happier, would be

more relaxed and more effective and productive in our daily work.

By creative listening, I mean listening to each word intently, intelligently, and thoughtfully. In listening so that when we hear what is being said, we react with inquiry not with defense, objectively and not subjectively.

The dietitian of today and of tomorrow must know how to listen to employees, patients, peers, and superiors. For instance, in the case of a complaint, she must know how to listen and to act, using her intelligence, her education, her training, and her personality so that what could be a drab and unpleasant experience for all concerned becomes an easy situation and a rewarding and satisfying one for the truly professional dietitian. As I see it, listening vs. creative listening is the difference between hearing the constant click-clack and squeal of the subway train and finding it annoying and listening to the same sounds but hearing the rhythm and eventually a beauty of pattern, of music almost, in what many call "just plain noise."

I suggest to you that you try these two approaches, if you happen to have the opportunity to ride the subway. I have, and I have come to enjoy such subway rides—albeit not during the height of the rush hour! Many a beautiful work of art—a poem, an essay, a piece of music, the treasures of the world—has been composed as the result of such creative listening. So, too, the professional person, the dietitian, who listens creatively as she carries on her work and fulfills her responsibilities will add immeasurably to the growth of her profession.

Creative Discussion

In addition to creative listening, and in essence a companion to it, is the ability to engage in creative discussion. Our profession has reached the enviable position it is in today because, through the years, its leaders have taken time to discuss, listen, and think creatively. More and more opportunities must be made available for the dietetic intern to engage in sessions where creative discussing, listening, and thinking are required.

One becomes competent in these areas only by practice. The path of least resistance is to accept things as they are, not to question or try to change things. It takes time and energy and biologic work to think and reflect. New ideas which will bring about change and growth come only as the brain is used. Strength comes to a muscle only through use. By analogy, we might consider the brain a muscle, the more it is used, the better able it is to produce new ideas, creative thoughts. We must continue to encourage, and challenge, and inspire, the dietetic interns to use their brains, to think, to listen, and to discuss creatively. To the extent that we succeed in this, we shall succeed in developing the leaders of tomorrow and we can be assured that our professional stature will grow.

Need for Professional Participation

And finally, if our profession is to continue to grow, the dietetic interns and the young members of our Association particularly must appreciate and understand the need to participate in the affairs of the local, state, and national associations. Membership in a professional organization is, of course, voluntary, but in a sense, it also brings security to its members. One of the prime desires of man, if not *the* prime desire, is for security. It seems to me, however, that, to have security, one must be willing to accept certain obligations, one of which, for a dietitian, is to be part of the whole of her profession and to be an active and participating member of the professional organization. Each of the 15,000 members of The American Dietetic Association individually represents the profession and each might be considered a link in the mesh that *is* The American Dietetic Association. The strength of the profession and its continued growth depend on the firmness of the mesh. Each missing link weakens the whole; the fewer missing links—in this instance inactive members—the brighter the future of the profession of dietetics.

There is much more that might be said about developing leadership and continuing professional growth. Much has been accomplished by the leaders of the internships through the years and much is now being achieved. But we must be constantly on the *qui vive;* we must keep abreast of the changes in and the changing needs of our society.

My assignment was to be inspirational, not academic; this has not been an easy task. Since my philosophy has always been that any speech that is in any way sermon-like should be brief, I shall conclude with a quotation from an address I read recently (2). I think this applies directly to the profession of dietetics, a profession dedicated to the *needs* of the world.

"By seeking new knowledge, by pausing to examine that which we do not understand, and by improving our professional skills, we will better serve humanity . . . the life around us and that of millions yet to come."

References

(1) MILLIS, J. S.: Responsibility in a troubled world. J.A.M.A. 174: 63, 1960.

(2) CLARKSON, M. R.: Rising Expectations of Veterinary Medicine in North America. Address given before the Canadian Veterinary Medical Assn., Halifax, Nova Scotia, July 25, 1960.

The Dietetic Internship[1]

WILMA F. ROBINSON

Dietetic Internship Liaison Director, The American Dietetic Association, Chicago

AS EARLY as 1903, there were "pupil dietitians." These prototypes of future dietetic interns were pupils of Florence Corbett, departmental dietitian of the Department of Charities in New York. This program was described by E. Grace McCullough at the eighth Lake Placid Conference on Home Economics, held in 1906. Miss McCullough, the first pupil enrolled in the course, indicated in her talk that applicants were required to be graduates of domestic science, to have taught one year, and to be over twenty-five years of age. The length of the course was three months.

By 1927, many hospitals offered courses for student dietitians. A survey of the programs available resulted in the development of a standard course outline which was approved at the Annual Meeting of The American Dietetic Association that year (1). Following approval of this outline, the first listing of courses for student dietitians was published in 1928 in this JOURNAL (2). It included forty-eight programs in the United States and one in Canada.

In 1947, the terminology was officially changed to "dietetic intern" and "dietetic internship." The change was recommended because the term "student dietitian" tended to suggest a person at the undergraduate level, rather than one who, like a medical intern, has earned a degree and is furthering his preparation beyond that stage. Also, the terms "intern" and "internship" are understood and appreciated because of the well known medical internship.

With the passage of years, the length of the internship has changed from the original three months to six months, then to nine months and eventually to the current plan of one year.

Academic preparation for the internship was at first a course in domestic science; then it became a two-year college program. A degree from a four-year college or university program, including certain required courses has been a requirement of The American Dietetic Association since 1928, but was considered desirable long before that date.

The number of dietetic internships has increased from the original forty-eight to sixty-one programs. The approved internships are now listed each year in the Association's *Annual Reports and Proceedings*.

The Concept of the Internship

From the preceding brief historical recapitulation, it is apparent that a need for some type of intensive, supervised guidance in a work situation was recognized very early in the development of dietetics as a profession. Helen Clarke, who wrote a doctoral thesis in 1934 entitled "The Professional Training of the Hospital Dietitian," included in her dissertation (3) a statement made in 1922 by Abby L. Marlatt of the University of Wisconsin (4):

"Throughout the country we have established a demand for a four-year trained dietitian with the interne period of probation similar to that required for the physician. The girl today who elects her major in nutrition must plan for her period of practice in an approved hospital before she can accept a position of trust in planning the diets of patients."

Today's internship provides opportunities for the intern to apply, under professional guidance, knowledge gained in the undergraduate program and to broaden this body of knowledge. The intern develops an awareness of the dietitian's opportunities and responsibilities as a professional person and appreciates the scope of dietetics as a profession. Class dicussion and clinical experience stimulate the individual to make critical judgments and evaluations, to use available resources in problem-solving, and to develop the ability to think creatively.

The undergraduate program fulfills the need for the acquisition of fundamental knowledge and stimulates the desire for further study. The internship provides the framework for gaining further knowledge related to dietetics and for translating this knowledge into desired results through the development of specific skills.

Internship Evaluation

From 1928 to 1930, The American Dietetic Association's listing of internships was based on the

[1]Prepared at the request of the Executive Board and the Dietetic Internship Board of The American Dietetic Association.

acceptability of information submitted on a questionnaire. Since 1930, internships have been visited for the purpose of evaluation for Association approval. In the beginning, these evaluations were made by committees of Association members. Later a member, appointed by the Executive Board, was given this responsibility, usually for a two-year period to conform to the plan for biennial evaluation. Since 1940, these evaluations have been made by a member of the Association's staff.

The Hospital Internship

Prior to 1933, all dietetic internships were sponsored by hospitals. This type of internship continues to be in the majority, as fifty-three of the sixty-one approved programs today are sponsored by hospitals.

The present hospital internship provides a broad program of study, including the administrative, therapeutic, and educational phases of dietetics. This is in marked contrast to the early programs in which the emphasis was primarily on therapeutic dietetics.

Approximately half of the hospital program is devoted to study and experience in food service administration. Knowledge of sound administrative practices is essential. Also, an understanding of food service administration is basic to effective performance in therapeutic dietetics, teaching, or other phases of the profession. Emphasis on financial management, cost control, personnel management, human relations, and the development of executive ability is most important if the internship graduate is to be prepared to meet the challenge of administration in hospital dietetics. Study and practice in menu planning and its evaluation, purchasing, quality food production and distribution, and the planning of food service facilities are vital phases of this experience in management. The dietitian's responsibility with regard to the maintenance of high standards of sanitation indicates her need to develop skill in training and supervising employees in sanitary practices.

The intern's experience in therapeutic dietetics is of equal importance. A background of knowledge in anatomy and physiology, biochemistry, normal nutrition and related subjects gained in the undergraduate program provides a sound basis on which to build in the internship a practical approach to the dietary treatment of the individual patient. The development of insight into how the dietitian works effectively with the doctor, nurse, and other members of the medical team is of vital importance in preparing the intern for practice as a dietitian. Of equal significance is patient contact, to learn how to provide all of the assistance possible to each patient to meet his nutritional needs. If the dietitian does not fulfill these responsibilities, she is failing to recognize the first objective of The American Dietetic Association: to improve the nutrition of human beings.

Experiences in therapeutic dietetics include planning modifications of the normal diet, visiting and instructing both adult patients and children, cooperating with other members of the medical team, and studying the relationships between diet therapy and total medical care.

The intern must also develop proficiency in teaching, inasmuch as the dietitian has many educational responsibilities, no matter what type of position she chooses. Therefore, the internship includes the study of teaching methods and practice in teaching patients, employees, and students in allied professions, such as nursing and medicine and, in fact, all those with whom she works and associates professionally. This type of experience is included in all intern services, but usually a period of time is scheduled for intensive experience in group instruction.

A research approach is useful in all learning. In the hospital internship, however, experience in a metabolic research unit is also recommended. This provides excellent opportunities for a deeper appreciation of the relationship between nutrition and total medical care.

Another important phase of any internship is the opportunity for the intern to gain an appreciation of the breadth of the field of dietetics. Included in this emphasis is a general concept of the extent and function of health and welfare agencies in the community. Such an understanding results in cooperation between the hospital dietitian and personnel of these agencies which is of definite value to the patient who is referred to an agency on dismissal from the hospital. Field trips or a brief period of experience may be arranged for the intern to meet and talk, not only with the personnel of health and welfare agencies, but also with dietitians in school food service programs, college food service, and commercial food service. An understanding of the scope of dietetics aids the intern as a professional person and as a contributing member of society.

The Food Service Administration Internship

The first internship emphasizing the role of the dietitian in the administration of food service in schools, colleges, and other non-hospital institutions was established in 1933 at the Women's Educational and Industrial Union in Boston. Seven programs of this type are now available, five of which are sponsored by colleges or universities, the other two by business or industry.

The primary objectives of this type of internship are study and experience related to the application of the principles of efficient food service manage-

ment and to the maintenance of the nutritional status of people who do not necessarily require modifications in their meal patterns because of illness.

Major assignments in the administrative internship are thus related to the organization and management of food production and service units, menu planning, food and equipment purchasing, food merchandising, financial management, cost control, personnel management, work simplification, and the planning of food service facilities. Great care must be taken in planning these programs to present the philosophy of the professionally qualified dietitian in food service management and to differentiate between the role of the dietitian and the role of the food service supervisor. The title "professionally qualified dietitian" should imply that the person is a member of The American Dietetic Association and is actively applying the principles of effective management and nutrition in planning and supervision for a total food service program or unit thereof.

In the college or university programs, major emphasis is, of course, on the management of various types of campus food service for students, faculty, and in some cases the public. These may include cafeterias and dining rooms in a college union building, residence halls, faculty club or tearoom. Experience in pediatric nutrition is also recommended. This may be in a university school on the campus or may be arranged through affiliation with a public school system. There may also be an affiliation with a commercial food service, such as a cafeteria or restaurant, to add to the scope of the program, so that the intern has experience in a unit operated for profit.

In internships sponsored by business or industry, the major experience is in cafeterias or dining rooms provided for the personnel of the company and for the public. Variety in types and sizes of units and in menu patterns is important in providing interesting and worthwhile experiences for such interns.

As in the hospital programs, it is essential that the interns obtain a broad viewpoint of dietetics. This is accomplished through affiliations and field trips. An affiliation may be with a hospital, to provide an opportunity for the intern to acquire a knowledge of therapeutic dietetics. Arrangements might be made for experience in a school food service program or commercial food service. Field trips may include health and welfare agencies, as well as other institutions of interest. All dietitians should be familiar with the many avenues through which sound nutritional practices may be promoted.

The Nutrition Clinic Internship

In 1935, an internship specifically planned for young women desiring to be associated with food clinics or in community nutrition programs was established at the Boston Dispensary. This program, now known as the Frances Stern Food Clinic Internship, is still the only program in this specific classification.

Primary emphasis here is on interviewing the patient and instructing him in normal nutrition and modified diets. The intern in this program gains experience in taking nutritional histories, reading and interpreting medical records and laboratory reports, instructing patients, preparing budgets for individual patients, and attending inter-staff and inter-departmental conferences. The preparation and use of visual aids for health education is also included in the experience planned for the intern. Other phases of dietetics which receive emphasis, although on a limited basis, are hospital food service administration, the teaching of students in allied professions, and research methods. Considerable attention is given to the work of the dietitian in community agencies and the integration of nutrition and social service.

Classwork in the Internship

All internship programs include class sessions, which may be planned as seminars, conferences, lectures, or demonstrations, as indicated by the specific subject matter. Internships affiliated with a university graduate school offer class programs which are more extensive and more formal than those in an internship without such an affiliation.

The primary purpose of class sessions is to provide opportunity for relating theory to actual practice. Classes also provide a means for the staff and interns to share current research findings.

Inasmuch as interns are required to assume responsibility for the presentation of case histories, JOURNAL club reports, and seminar assignments, they gain valuable experience in the orderly presentation of subject matter. The organization of this subject matter encourages exploration of a great variety of resources—and this, too, is basic experience for the interns. They also learn techniques of effective communication with persons within the profession and with others whose background of education and work experience is quite different.

A number of approved dietetic internships offer opportunity for the intern to earn graduate academic credit, although the hours of credit vary considerably. Some internships offer one or two graduate courses and others provide sufficient academic credit to complete an appreciable number of the requirements for a master's degree.

Financial Assistance

Financial assistance is available to dietetic interns through scholarships and loans. A limited number of scholarships, made possible through a Mead Johnson Company grant, are administered by The

American Dietetic Association. The Mary Swartz Rose Fellowship is awarded annually by the Nutrition Foundation to an outstanding candidate for graduate study and research in nutrition or allied fields. Loans are available, also, to dietetic interns and graduate students from The American Dietetic Association Loan Fund. Many state dietetic associations offer scholarships to students entering dietetic internships.

In recent years, organizations sponsoring the dietetic internships have increased the stipends which they offer. As living costs increase, it follows that the need for financial assistance or an adequate stipend for dietetic interns is greater.

The Future

Although the basic philosophy of the internship remains much the same as in the pioneering days of Miss Corbett, the program changes have been many. They have occurred so gradually, however, that they have not created sharp contrasts. Without doubt, the future holds startling changes in our educational programs and in the practice of dietetics. They will be inspired by dietitians who are constantly alert and ready to introduce needed innovations. New ways will be discovered to improve the nutritional status of human beings. The directors and staff members of dietetic internships are in key positions to help determine the future of the profession. *Every* dietitian, however, will play a vital role in this progressive program of growth.

References

(1) COMM. ON EDUCATION: Outline for standard course for student dietitians in hospitals. J. Am. Dietet. A. 4: 35, 1928.

(2) THOMA, K. M.: Current list of hospitals giving the approved course for student dietitians. J. Am. Dietet. A. 4: 35, 1928.

(3) CLARKE, H.: The professional training of the hospital dietitians. Ph.D. thesis, Contribution No. 602, Teachers College, Columbia University. 1934.

(4) MARLATT, A. L.: Achievements in home economics. J. Home Econ. 15: 5, 1922.

Food Service in Nursing Homes

In the spring of 1959, a survey of twenty-three nursing homes (25 per cent) in Seattle and King County (Washington) was conducted by the county health department's Adult Health Division. In visiting the homes, the nutritionist explained to the operators that her visit was not for licensing purposes and that their replies would not affect their license or be made part of their records. The information was being obtained to acquaint the health department with their food service practices and problems. The visit also took on educational aspects in some instances, with suggestions and help being given if the operator requested it. Twelve points of special interest emerged from these interviews:

(1) The regulation requiring a 14½-hr. or less span between evening meal and breakfast was being observed in only half of the homes. The smaller, Class 3 (up to 30 beds; patients requiring bed rest but who can feed themselves, who may be ambulatory or semi-ambulatory, and who may have a definite but minimum modification of diet) homes were the worst offenders. Consultation was needed to help in scheduling cooks' working time to cover the meal hours.

(2) The homes were not all planning for 3 oz. protein food in the evening meal, as stated in regulations. It would be clearer to many operators if the 3 oz. were spelled out in terms of sizes of servings and examples of protein food were given.

(3) The homes did not receive clear, specific dietary orders from physicians, nor were they following such orders as they received. The need for a diet reference from which diets might be ordered and followed was indicated.

(4) Many homes with patients on low-sodium diets were applying this treatment to all patients without physicians' orders.

(5) Less than half of the homes were planning, posting, and keeping their menus as required. More education in the value of menu-planning was needed.

(6) Nursing homes were not running their food service on a business-like basis. Records of kinds and amounts of food purchased were not kept as required. Many operators not only did not keep records essential for evaluating food services, but did not understand their value.

(7) The values of dining room service to patients needed to be stressed to some operators.

(8) Snacks were not being offered to all patients in all homes. Consultation was indicated to help operators recognize the importance of snacks, particularly when a light supper is served late in the afternoon.

(9) More milk was needed in many of the patients' diets, as well as more emphasis on citrus juices or fruits and dark green or yellow vegetables to increase ascorbic acid and vitamin A intake. More bulk and cellulose were indicated in many of the menus.

(10) Nursing home operators needed help with purchasing. Some homes still did all their food shopping in supermarkets.

(11) Consultation was needed in planning well balanced, nutritious meals to meet the patients' needs. More understanding was also needed of older people's eating patterns.

(12) Operators were interested in learning more about efficient food service and wanted help in this area.

In addition, operators made many suggestions to improve food service. The majority requested menu suggestions, especially for suppers. Many wanted to know how to standardize recipes, how to cook meats and prepare salads for the geriatric patients, what to serve on meatless days. They needed help in scheduling cooks and in keeping records, and were especially interested in food record forms, ways of evaluating food service, simple bookkeeping, and ways to figure cost-per-patient-per-day in terms of food costs. Some requested help with modified diets, written so that cooks can understand what the patient can and cannot have, so that subsitutions can be made. Other requests for help involved tube feedings, inexpensive high-protein liquid feedings, liquid feedings in general, and diets for older people with diabetes.—*By Dorothy Conway. Condensed from* The Washington Dietitian *10: 4 (fall), 1959.*

Improving Quality Foods[1]

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OUR VERY existence and, in large measure, the satisfaction in life which we obtain are determined by the foods we eat. Past experience indicates that the average person has tolerated poor food in institutions because he felt there wasn't anything that could be done about it (1). The psychologic impact of food on morale is heightened in the hospital by two unique conditions characteristic of the clientele. First, the consumers are under stress. Second, they are limited in their freedom of choice (2). Therefore, we, in hospitals, need to offer extra-fine food to them.

At the University of Michigan Hospital we are still dissatisfied with the quality of food service we offer to our customers and patients. We feel that no other department, not even administration, permeates the entire Medical Center and affects patients and staff as intimately and continuously as does the Department of Dietetics (2). High on our list of objectives is quality food for all of our customers.

Maier indicates (3) that the important thing for any group working toward common objectives is to perceive forward movement toward the goal. Therefore, in planning improvements, we enlisted the services of the entire department plus the students of other disciplines. Early in the academic year, we taught the dietetic interns the procedures of systems analysis and assigned individual projects to them so that the new tools of analysis would be used. In addition, we called on the University of Michigan Department of Industrial Engineering for help. Our department became a laboratory for dietetic interns and graduate students in industrial engineering. As a result, several extremely valuable studies were conducted, recommendations reviewed, and new systems installed. Each project directly affected the quality of the food received by the customer. We are motivated to learn and perform only as we are allowed to see the results of our efforts, and rewards have been evident to the students and interns.

The following seven studies were performed last year in the food production areas:

Time and temperatures of food
Process analyses of cooked vegetables
New cycle menus and recipe standardization
Centralized preparation of tube feedings
Centralized portioning of salads and desserts
Special dry mixes for the bakery
Analysis of present equipment and arrangement

Studies in Food Preparation Procedures

The entire group of dietetic interns was involved in our time-and-temperature study. The time consumed in the preparation, distribution, and service of all cooked foods was determined. At each step in which the food was handled or moved, we recorded times and temperatures. The interns were armed with work sheets, thermometers, and watches, and each was responsible for one phase of the record. When the material was summarized, we knew why we did not serve quality food and why the patient was right when he said, "My food is cold." This study revealed the need for many changes in procedure if we were to achieve our objective of quality food.

A more specialized study concerned our methods of vegetable cookery. One dietetic intern worked for approximately six to eight weeks in analyzing existing methods of cooking vegetables, recording her findings, and attempting to learn why vegetables were prepared too far in advance, why we were using improper or poor cooking methods, why the work flow was poor, and why the vegetables were handled so many times before reaching the patient or customer. Her objective, and ours, was to provide more nutritious, more attractive, better tasting, and hotter vegetables for all of our customers. Due to her efforts, cooking times for vegetables have been changed, methods have been standardized, and the employees have been trained in the objectives and procedures and encouraged to participate in further improvements in the area of vegetable cookery. When the dietetic intern who had conducted most of the work on this project was scheduled to leave

[1]Presented at the 43rd Annual Meeting of The American Dietetic Association in Cleveland, on October 20, 1960.

[2]Credit for this report belongs to the entire group who have worked so diligently toward our goals at The University of Michigan Hospital. I am merely their representative selected to share with others our activities.

the area, a second intern was assigned to the project and carried on with the teaching of new methods to all the employees, continued the review and the follow-up. Both of these girls reported high satisfaction, even though they had many problems to overcome before they felt the employees could go ahead with only occasional checking of procedures by the supervisors.

Early last year we felt a need for new cycle menus. The entire class of dietetic interns, in small groups, worked on the new cycle. When it was completed to their satisfaction and ours, we assigned one intern to start the recipe standardization in our test kitchen. As she proceeded through the early stages of the standardization, she became vitally interested. We then sought assistance from Pearl Jackson Aldrich, Ph.D., and Grace M. Miller, Ph.D., at Michigan State University because of their extensive background in recipe standardization. We will continue recipe standardization and the training of the cooks and bakers who are responsible for producing the recipes which we recommend, because this phase of quality food production is never ending.

We were unhappy with the quality of the tube feedings being prepared in the separate food service areas. We felt it would be highly desirable to control the sanitation of the equipment, the use of the raw ingredients, and the packaging of the final product. Therefore, we withdrew this function from the thirteen preparation areas and assigned it to individuals who were given special training. We are now closer to a quality product for our critically ill patients.

We have centralized the individual portioning of all salads and desserts sent out for customer consumption. The workers in this area have set very high standards for themselves. They have been so motivated by training and customer compliments that they are now making additional suggestions, bringing in pictures they see in the periodicals and newspapers and new ideas they glean while visiting other food service operations. They are extremely proud of their contribution to quality food service. This centralization required many hours of study and planning to insure timely production and distribution of the foods.

When the studies were going on in other areas of the kitchen, people working in the bakery felt there was much they, too, could do to improve the quality of the food. Frequently, their large production work load was interrupted with requests from supervisors for small orders of cooked or baked items for particularly sick patients. In thinking about the time required for these interruptions, the supervisor in the bakery decided to work out formulas for the items which were most frequently requested. As a result, we now prepare dry ingredient mixes in small individual portions—pre-measured or pre-weighed, packaged, and stored. As the requests come in for these items, we add the wet ingredients and produce the single items or small quantity recipes very quickly. Here again, study and planning is allowing us to do a quality job for all food items.

Industrial Engineering Students Assist

A graduate student in industrial engineering last summer asked—and received—permission to use our food production areas as the laboratory for a project for his senior class in plant layout. As his students progressed, they studied our functions and recommended possible changes of work flow, equipment arrangement, and combinations of functions. We felt this was a wonderful opportunity for us—and for them—because they came to the area completely unprejudiced and uninhibited by previous work experience in food service. As a result of the projects of these students, we anticipate many effective changes that can be made within our present organization. They received valuable experience and we received the results of many hours of study which it would not have been possible for our present staff to perform. In addition, these students have skills and techniques of analyses which we could not teach our dietetic interns in the short time they are with us.

Initially, with the help of the Industrial Engineering Department, we took motion pictures of the tray assembly method then in use. Methods improvements were recommended by dietitians and supervisors on our staff. The actual training of employees to perform the new methods was done by our training director. After the training had been completed, additional motion pictures were taken to show the differences between the two systems. These movies will be used in teaching the dietetic interns and all of our employees how to look for obvious ways in which their work can be improved and simplified.

A graduate student in industrial engineering continued this project, when we presented him with the following problem-situation:

> Our tray assembly was producing only 2½ trays per minute, even with the improved methods mentioned above. We still had complaints of cold food from patients. The Nursing Service was distributing the trays and, because of its staffing problems, carts loaded with six trays often stood from 5 to 17 min. before the last tray was distributed.

This student spent the entire summer studying methods and making recommendations. We are now considering the complete assembly and distribution of trays to the patient's bedside, thus removing this function from the Nursing Service. All of the problems related to this tremendous change have not as yet been resolved. However, we anticipate that

within the next year, we will be able to make the change, reduce the number of persons needed for tray assembly and distribution, and still have a greater chance of delivering quality food to the patient.

Other Studies

Another project involved job analyses and the writing of a training manual for food service workers. This was done by our training director with the assistance of several dietetic interns. All jobs were studied extensively, recommendations were made to the assistant directors in charge of the different areas, and final job descriptions were written. The training manual was a result of this intensive study and is presently being used by the supervisor and dietitian in each of our food service areas.

In another area of study—sanitation—a dietetic intern and a resident in hospital administration cooperated. They studied all the bids received, prepared a narrative analysis, and presented the results of their study to the administrative group in the department plus the assistant director of the hospital. Their justifications were questioned by the entire group, and as a result of their recommendations and our later study, a bid was awarded. Both the intern and the resident were making decisions and recommendations as though they were department heads.

The process analysis of functions related to food service was performed by a systems coordinator on our own dietary staff. He was asked to identify in narrative form, the entire system of food procurement, storage, processing, cooking, distribution, and service so that we might understand the time element and the methods related to the total operation. Often, we have a problem related to the total system. Unless we have identified this entire function, individual studies must be made each time a problem arises. Since this process analysis has been completed, we can refer to it each time we have a complaint or request for additional service and very quickly prepare an answer. This study required weeks, and it took even longer to write up in a form which would be easy to use for reference. It will be revised only as individual components within the "process" change. It should be of great help to us within the next year, for we know the areas which need additional studies.

Cost control for food to patient areas was a matter about which we had insufficient information. A dietetic intern was asked to set up the controls, the form, and the tally sheets so that we could have a daily report of actual cost of food delivered to all thirteen patient food service areas. We feel that cost is important, but that, in addition, quality food service is our primary objective. Consequently, we are identifying food costs and attempting to hold them in line and still achieve our goals.

Food Service to the Public

To improve our service to the public, we have studied three parts of our operation: dish movement and dining room arrangement, the customers' needs, and catering activities for regular and special customers.

Another student in industrial engineering was asked to work on the problem of dish movement and dining room arrangement. We presented to him the following situation for study:

> Employees were complaining about the time they had to stand in line to receive their food before they could actually sit down to eat it. We were running out of dishes, even though we had a large stock of all items used in our cafeteria. We had a dining room arrangement which was not particularly attractive because it was cluttered with large carts on which soiled trays were placed by the customers. Could he help us solve these problems?

He recommended that the carts be removed from the dining areas. This we did. The customer now carries his tray to a trayveyor which was there all the time but had been used only by our employees for unloading the carts and sending the dishes to the dishwashing machine. A second coffee-break line has been opened to cut down the length of the line. The time has been reduced for any dish in the cycle between clean and soiled and back to clean again, which in turn reduced the stock of dishes in circulation. He made several other recommendations which we are now studying and trying to put into force.

The Industrial Engineering Department also supplied a student to make a statistical study of our customers' needs, because our problem of the customer thinking he must stand in line too long was beyond the scope of the earlier study. The second student analyzed statistically the selections of the customers. From this, we could determine the foods we need to meet customer demand and how they should be arranged. His recommendations allowed us to rearrange items on the cafeteria line for ease and speed of customer selection. We moved a cashier's station so the customer would be served more quickly and it would take him less time to pay. Both of these studies were valuable and, even though we have used only a small portion of the recommendations, we will be considering all of the others.

Catering for regular and special customers has also come under scrutiny in a project in which all employees—staff, dietetic interns, the cafeteria manager, and the assistant director of dietetics in charge of food production—participated.

As a result of the first year of study and change, we have made steady progress toward better food

service. However, one of the largest dividends of this work has been the realization of the value of inter-disciplinary study and cooperation. Such joint efforts have certainly been instrumental in achieving in our students and interns an understanding and acceptance of the problem-solving approach to management. We must understand the potentialities of people, because people, in the last analysis, direct science (4). One of the nation's leading advisors to top management has said (5), "The human being is the central, the rarest, the most precious resource of an industrial society." If we can motivate and train the people within our organization toward our objective of quality food for all customers, then we will have achieved one of the highest rewards to be gained in dietetics today.

References

(1) WEST, B. B., AND WOOD, L.: Food Service in Institutions. 3rd ed. N. Y.: John Wiley and Sons, Inc., 1955, pp. 23-24.

(2) BURLING, T., LENTZ, E. M., AND WILSON, R. N.: The Give and Take in Hospitals. A Study of Human Organization in Hospitals. N. Y.: G. P. Putnam's Sons, 1956, pp. 297, 299.

(3) MAIER, N. R. F.: Psychology in industry. *In* A Psychological Approach to Industrial Problems (Carmichael, L., ed.) 2nd ed. Boston: Houghton Mifflin Co., 1955., p. 407.

(4) KINNEAR, W. H., ed.: The Creative Power of Mind: The Scientific Use of Your Thought for Abundant Living. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1957, p. 40.

(5) MENNINGER, W. C., AND LEVINSON, H.: Human Understanding in Industry. A Guide for Supervisors. Chicago: Science Research Assoc., 1956.

Food Discards

Whether a family and all of its constituent members enjoy diets that meet the recommended allowances for good nutrition depends on discriminating selections among the foods on the market and among those that are brought into the kitchen and served at the table.

This complicated qualification must be made because foods are not always chosen by families or eaten by the several family members in proportion to nutritional needs. The amount of food brought into the kitchen tends to exceed what is actually needed, especially when food is plentiful and cheap. The caloric value of the food brought into the nation's kitchen may amount to as much as 25 to 50 per cent more than the well fed family needs. But no one knows just how much of each kind of food is actually eaten and how much is discarded.

Undoubtedly, the amount of edible food available as compared with what actually is eaten differs from family to family and is influenced by many factors. It will depend on the need for thrift and on selection and household management of food. For example, more than the average amount of food probably is discarded when kitchen and table scraps and leftovers are used to feed pets, chickens, or pigs; when home food storage facilities are inadequate; or when the foods available are of less than prime quality and have been subjected to little sorting, trimming, or processing before being brought into the kitchen. It seems likely that household food losses and discards seldom amount to less than 5 per cent of the calories provided by the edible food available, and may amount to 25 per cent or even more. Food discards in institutions and public eating places probably run much higher.

Fat discarded in kitchens and at the table probably accounts for the largest share of uneaten energy-yielding food. This is the case even when large amounts of external fat are trimmed from meat before we buy it, a wholesale and retail practice widely advertised today. The amount of fat coming into kitchens is now at an all-time high, amounting to 40 per cent or more of the calories. Although much may be discarded, much is also eaten. Carefully made dietary studies of individual men show around 40 per cent of calories from fat—some as high as 55 per cent.

The relatively inexpensive carbohydrate-rich foods, such as breads and potatoes, may comprise the second most significant food discards. Bread leftovers show up beside the plate, and there are the crusts and odd slices that the family food manager considers too stale to offer at a later meal. In our society of abundance, both grain products and potatoes are perhaps too thoughtlessly pushed to one side. Indeed, one of the unnoticed revolutions in food consumption patterns has been the shift in the form in which we consume carbohydrates. In 1910, we were getting 68 per cent of the total calories from carbohydrates from starch and the more complex forms of carbohydrates, and only 32 per cent from sucrose, dextrose, and the simpler sugars. Today, the percentage coming from starches is estimated at 46 per cent, and from sugars, at 54. This shift may be significant. Fat metabolism in laboratory rats appears to be more readily disrupted when the dietary carbohydrate is in highly soluble and readily absorbable forms. This finding may or may not be applicable to human beings. It reminds us, however, that we once ate much more bread and potatoes than we do now.

Succulent vegetables may be discarded to a greater extent than fruits, but in either case, the caloric value of these foods tends to be relatively low. Invisible losses of minerals and vitamins, especially the water-soluble and heat-labile ones, may be considerable, however, both in marketing channels and in household food preparation and service, unless special attention is paid to practices that can help conserve these nutrients.

Little, if any, milk, cheese, eggs, and the lean parts of meat tend to be discarded. These foods are relatively expensive and are important nutritionally for protein and many kinds of minerals and vitamins.

Considering the kinds of food that are most likely to be discarded by the ultimate consumer in the kitchen or at the table, we may perhaps conclude that the food actually eaten at meals tends to be richer in proteins, minerals, and vitamins in proportion to calories than is the food that comes into the kitchen. But we need to move still further in this direction if all persons are to be as well fed as our national food resources now permit. It is chiefly through the additional use of foods that are important carriers of certain vitamins and minerals that the greatest nutritional gains can be made in the future.—*Excerpted from a paper by Hazel K. Stiebeling, Ph.D., given before the Melamine Council on February 16, 1960, in New York City at a special program on "The Revolution in American Diet."*

Listening Is Your Job![1]

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"LISTENING *is* my job," typified the comments of 125 hospital dietitians who reported 396 incidents from their daily working life in which listening was a critical factor. An earlier study (1) indicated that listening occupies the major part of dietitians' working time and and is vital in all of the communication situations which occur on the job. The present study was intended: (a) to move a step further in analyzing the listening life of hospital dietitians; (b) to discover the relationship of the hospital dietitian's listening to her job effectiveness; and (c) to identify as specifically as possible the characteristics and consequences of good and poor listening by the hospital dietitian on the job. The hypothesis was that such evidence might validate the inclusion of listening in the training program for hospital dietitians.

Although the sample was small, it appeared fairly representative. The dietitians reporting worked in forty-four states and the District of Columbia. They were employed in nineteen kinds of institutions and job situations, the most frequent of which were private hospitals, Veterans Administration hospitals, city and county hospitals, university hospitals, and state departments of health. They had sixty different job titles, the most frequent being Chief Dietitian, Dietitian, Director of Dietetics, and Chief of Dietetic Services. Their professional experience ranged from one to thirty-nine years, with an average of seventeen years. They had been in their present positions from one to thirty-five years, with the average being seven. In other words, the group represented a cross section of the total population of hospital dietitians; thus their experiences and listening behavior should be fairly representative of the profession as a whole.

When asked to comment briefly on the place of listening in their working life, the dietitians went "all out" to emphasize its importance. As one dietitian expressed it, "The greatest contribution to the service that I can make is to be a good listener." Equally enthusiastic was the report of another who stated that listening is "as important as breathing . . . Our life on the job depends on it." A bit more quantitative was the comment of another, "Sometimes it seems as though listening is 75 per cent of my daily work. On some 'calm' days, it is reduced to 50 per cent." Such testimony served to underscore the importance of this study.

The dietitians were also asked to evaluate themselves as listeners. On the basis of their remarks, it appeared that 45 of the 125 (36 per cent) considered themselves to be good listeners. They described their behavior in such terms as: "try to be," "others say I am," and "the people come to me to tell me their problems freely." Another 59, or 47 per cent, seemed to consider themselves to be average listeners; their comments were generally qualified, such as "fair to good," "sometimes," or "if I'm not pressed for time." Only 15, or 12 per cent, described themselves as poor listeners, using such terms as: "half-listen," "impatient," "interrupt," or "react emotionally." The remaining six did not answer the question.

The 125 hospital dietitians submitted detailed descriptions of 396 oral communication incidents which occurred on the job and in which the dietitian

TABLE 1 Persons involved in dietitians' listening incidents

PERSON TO WHOM THE DIETITIANS LISTENED	LISTENING PERFORMANCE		TOTAL INCIDENTS
	Good	Poor	
Employees	105	72	177
Other dietitians	19	18	37
Other supervisors	21	12	33
Patients	19	8	27
Nurses	10	11	21
Doctors	14	6	20
Hospital administrators	14	4	18
Students	11	6	17
Secretaries	6	7	13
Salesmen	3	3	6
Miscellaneous	13	14	27
Total	235	161	396

[1]A preliminary report of this study was given by the author at the 42nd Annual Meeting of The American Dietetic Association in Los Angeles, on August 25, 1959. The final analysis of data was completed and the paper submitted shortly before his untimely death in December 1960.

TABLE 2 Messages involved in the listening incidents

TYPE OF MESSAGE	DIETITIANS' LISTENING PERFORMANCE		TOTAL INCIDENTS
	Good	Poor	
Listening to Employees			
Responding to criticism	15	10	25
Asking for time off	12	7	19
Requesting change in work	7	8	15
Explaining changes in procedure	11	1	12
Discussing personal problems	8	3	11
Complaining about work	8	3	11
Explaining situation	5	5	10
Explaining tardiness or absence	6	2	8
Requesting change in vacation	4	3	7
Complaining about another employee	4	3	7
Asking for attention	0	6	6
Complaining about pay	4	1	5
Being interviewed	3	2	5
Explaining inefficiency	3	2	5
Responding to directions	1	4	5
Complaining about procedures	1	4	5
Explaining reason for quitting	4	0	4
Refusing to obey orders	1	2	3
Unclassifiable	7	6	13
Listening to Other Dietitians			
Requesting change in work	4	5	9
Responding to criticism	2	3	5
Complaining about work	1	4	5
Asking for information	2	2	4
Discussing personal problems	2	1	3
Reporting on situation	2	1	3
Unclassifiable	6	1	7
Listening to Other Supervisors			
Explaining personnel problems	7	0	7
Complaining about employee	3	1	4
Complaining about procedure	2	2	4
Requesting change in work	3	0	3
Explaining procedure	2	1	3
Asking for information	0	3	3
Unclassifiable	4	5	9
Listening to Patients			
Complaining about food	9	1	10
Explaining diet	2	3	5
Responding to criticism	4	1	5
Complaining about diet	1	2	3
Unclassifiable	3	1	4
Listening to Nurses			
Complaining about food	4	0	4
Requesting service	2	2	4
Explaining situation	2	1	3
Responding to criticism	0	3	3
Unclassifiable	2	5	7
Listening to Doctors			
Explaining order	7	3	10
Complaining about food	5	3	8
Unclassifiable	2	0	2

TABLE 2—Concluded

TYPE OF MESSAGE	DIETITIANS' LISTENING PERFORMANCE		TOTAL INCIDENTS
	Good	Poor	
Listening to Hospital Administrators			
Complaining about food	4	1	5
Explaining policies	2	1	3
Discussing plans	2	1	3
Unclassifiable	6	1	7
Listening to Students			
Explaining difficulties	3	0	3
Complaining about work	1	2	3
Unclassifiable	7	4	11
Listening to Secretaries			
Asking questions	2	2	4
Responding to criticism	1	2	3
Unclassifiable	3	3	6
Listening to Salesmen			
Talking about products	2	3	5
Unclassifiable	1	0	1
Listening to Miscellaneous Personnel			
Complaining about food	6	3	9
Requesting information	2	6	8
Explaining procedures	3	4	7
Unclassifiable	2	1	3

carried a reponsibility as a listener. In each case, it appeared that the dietitian's behavior was the critical factor determining the success or failure of the communication. The incidents were first classified as examples of good or poor listening on the part of the dietitian, and then further grouped in terms of the other person or persons involved.

Persons Involved in Listening Episodes

There were more instances of good listening than of poor; 59 per cent of the incidents showed the dietitian as a good listener, and 41 per cent indicated shortcomings in their listening behavior (Table 1). This difference in frequency does not prove that a majority of hospital dietitians are good listeners; it may indicate that dietitians who are good listeners were more likely to respond, or that those who did respond, unknowingly, tended to report incidents which put them in a favorable light. Curiously enough, some dietitians reported that it was easier to remember and report incidents illustrating their good listening; others reported that poor listening experiences stick in the mind because of their consequences.

As expected, the dietitian's most frequent oral communication is with the employees whom she supervises; therefore, the number of such incidents, both good and poor, far out-numbered any other situation. However, the variety of situations did indicate the breadth of the dietitian's oral communi-

cation experience on the job. If the proportion of good and poor listening incidents can be taken as a measure of the dietitian's relative effectiveness in communicating with various types of persons, she was more effective when listening to hospital administrators, doctors, and patients than when listening to other dietitians, nurses, or secretaries. This phenomenon many well indicate that organizational personnel communicate more effectively when it seems in their best interests to do so. According to Jackson (2), therein lies one of the major communication problems of organizations such as hospitals.

Messages Involving Listening

The substance of the communication provided another basis for classification of the good and poor listening experiences. An attempt was made to identify the purpose or essence of the communication in which the dietitian was primarily a listener. Table 2 is a summary of the results in terms of listening effectiveness and the other person involved.

What kinds of messages are directed to the hospital dietitian in the course of her daily work? The variety of messages is immediately apparent, and it is interesting that the proportion of the messages which are essentially negative in tone—complaining, protesting, defending, objecting. The dietitians seemed to be good listeners when employees were explaining reasons for tardiness or absence, explaining changes in procedure, complaining about pay, and threatening to quit, but they did not listen well when the employees were requesting changes in working conditions, complaining about procedures, or reacting to directions given.

The hospital dietitians seemed relatively inattentive to the requests, reactions, and complaints of their colleagues, who were usually assistants in one capacity or another. On the other hand, they were quite sensitive to information received from other supervisory people on the hospital staff. Complaints about food, as expected, ranked high among the communication episodes involving patients; apparently the dietitians recognized the right of patients to complain—and listened to them. The willingness of the dietitian to listen to nurses was not so evident; whatever the cause, dietitians were more inclined to "bend an ear" to what the doctors had to say than to the nurses' comments.

The hospital administrator was in the enviable position of having the dietitians make special effort to understand what he said, no doubt because he was high man on the administrative totem pole. Students, secretaries, salesmen, and sundry other administrative personnel of the hospital from the business manager to the superintendent of maintenance did not get the dietitian's ear very readily, unless they were complaining about the food. The dietitians were especially attuned to remarks about the food.

TABLE 3 Characteristics of the poor listener

CRITICAL FACTOR	NUMBER OF INCIDENTS
Asked no questions to learn the facts	45
Was impatient and showed it	44
Jumped to conclusions about the speaker's message and motive	37
Was insensitive to the speaker's feelings	26
Became angry and showed it	22
Was unwilling to listen	13
Was inattentive while listening	12
Was half-listening, missing much of the message	11
Was critical of the message and speaker	9
Interrupted the speaker	7
Was uninterested and showed it	2

Factors in Poor Listening

The incidents themselves warranted careful study to determine what the dietitian did or did not do as a listener which contributed to the success or failure of the communication. The examination of instances of poor listening is reported in Table 3 as a summary of specific behavior factors which seemed to account for the failure of the communication in the 161 instances in which the dietitian was a poor listener.

It is interesting that only four of the characteristics referred specifically to listening skills or techniques; all the others involved or represented attitudes or predispositions with regard to the situation, the message, or the speaker. To ask questions, to withhold judgment, to give attention, and to hear the person out without interruption are generally recognized skills of good listening which can be learned and practiced until they become matters of habit. But impatience, insensitivity, anger, disinterest, and a general lack of concern for the other person, whoever he may be, are aspects of one's personality, related to one's human values, the very foundation of human relationship without which democratic organization is impossible.

In each case, the dietitian was asked to report what happened as a consequence of the communication breakdown. These outcomes are summarized in

TABLE 4 Consequences of poor listening

CONSEQUENCE	NUMBER OF INCIDENTS
Irritation, unhappiness	70
Embarrassment to both parties	17
Inefficiency	14
Antagonism, anger	12
Employee quit	11
Dietitian lost face	9
Confusion on the job	7
Employee illness	4
Anxiety, tension	2

Table 4. They provide eloquent testimony of the importance of effective communication on the job and the unfortunate consequences of mis-communication and poor listening. Of course, the single episode may not have been the *only* factor contributing to the consequence, but the dietitian felt that it was a primary causal factor.

Causes of Poor Listening

Analysis of the poor listening incidents also revealed some of the causes of poor listening which are probably at the heart of the matter and should be seriously considered if the dietitian is to become a better listener. They can be categorized as follows:

Negative attitudes or predispositions toward the speaker
Other things which are, or seem, more important than listening to the speaker
Personal fatigue, physical and mental
Pressure of duties and deadlines
Being emotionally upset, angry, and frustrated
Personal problems which make it difficult to give the speaker full attention
Conflict of role and relationship as a person and an employer or supervisor
Differences in status, education, language, and culture

It is obvious that these causes can become convenient rationalizations for the individual who seeks to explain away her own shortcomings in communications. The causes listed above were evident in the incidents and in the dietitians' own evaluations of the incidents.

Several of these causes are related to the dietitian's work load; to so burden the dietitian with duties that she is unable to communicate effectively on the job would seem to defeat the purpose of the organization. Perhaps a re-study of the job would be in order; in many cases, it is probable that many changes could be made. It seems that there are so many specific activities to be performed that the dietitian has little time to be a supervisor, or at least a good supervisor.

Two of the causes have to do with the personal orientation of the dietitian to herself and others. Perhaps more heed should be given to her human relations when she is assigned a supervisory role. The other two causes—conflict of roles and differences in status—are basic limitations imposed by the organizational structure. In other words, they seem to be inherent weaknesses of organizations such as hospitals.

Evaluation of one specific incident illustrating poor listening may help to clarify the characteristics, consequences, and causes of poor listening. The incident, in the words of the dietitian, follows:

> Miss L., a nurse, came into the kitchen when we were serving and said, "I have a question to ask about the trays on my ward." I (the dietitian) replied, "We are serving another ward and I will come down to see you when we have finished." After we had finished serving, I went to Miss L.'s ward to find out about the trouble. She gave me four tray cards for patients who hadn't been served. She stated, "I wanted to give them to you in the kitchen, but you cut me off." By the time I got back to the ward kitchen, the food had been sent back to the main kitchen and we had to call for more food for the extra trays.

The dietitian in her commitment to a specific routine did not sense that the nurse's request might be in order and that she, the dietitian, should have taken the time to ask for more information. Furthermore, the dietitian's reply was evidently given in such a sharp tone as to convey a reprimand. In the end, time was wasted which would not have been lost if the initial request had been heeded; in addition, rapport between the nurse and the dietitian was strained. The cause in this instance seemed to be the dietitian's rigidity with regard to routine and her irritability under the pressure of her duties.

Characteristics of the Good Listener

Improvement in listening is a matter of avoiding the errors of the poor listener and emulating the behavior of the good listener. Most of the reporting dietitians were apparently good listeners on the job most of the time. Their good listening behavior was also analyzed and specific characteristics were identified as recorded in Table 5.

Again, it is possible to separate the skills of listening from listening attitudes and to note that in most of the good listening incidents, the critical factor was attitude not action. Acceptance, sensitivity, patience, respect, interest, concern, willingness, sympathy, and appreciation all describe the attitudes of the good listener, the way he approaches other people, the kind of person he *is*. Because attitudes are not readily changed or adopted, improvement of listening in face-to-face situations is very difficult.

However, something *can* be done about the *skills* of good listening, such as hearing the other person

TABLE 5 Characteristics of the good listener

CRITICAL FACTOR	NUMBER OF INCIDENTS
Accepted the person and his reasons	63
Was sensitive to the speaker's feelings	54
Heard him out	41
Listened to his reasons	37
Asked for his reasons	32
Was patient while listening	23
Was interested in him and his reasons	23
Respected him and his ideas	19
Remained calm in the face of anger	18
Was willing to listen	14
Was sympathetic	12
Encouraged him to go on	7
Withheld judgment until he finished	5
Was ap reciative	4

TABLE 6 Consequences of good listening

CONSEQUENCE	NUMBER OF INCIDENTS
Improved human relationships	60
Achieved greater satisfaction and happiness on the job	55
Solved the problem	44
Relieved the speaker	14
Kept the employee from quitting	9
Dietitian accepted speaker's suggestion	7
Speaker accepted dietitian's suggestion	7
Calmed the speaker	6
Worked out compromise	4

out, asking questions, encouraging the speaker to go on, and perhaps withholding judgment. These techniques can be objectified in some degree, described, studied, and practiced. Most prominent among the critical factors were the psychologic patterns of acceptance and sensitivity, particularly with respect to the employees being supervised, people whose language and education limit their oral communication.

Good listening promotes good human relations and rapport. The consequences of good listening are listed in Table 6. Most frequently the outcome was a sense of mutual understanding which results in good job relations and efficiency. It is interesting that in nine cases, thanks to the good listening of the dietitian, an employee about to quit was persuaded to remain on the job.

The incident which follows illustrates beautifully the patience and human understanding which characterize good listening and good supervision:

Mabel had been bickering with the other girls in the kitchen most of the morning. I (the dietitian) decided to learn why.

D.: Good morning, Mabel. How are you today?
M.: Fine, I guess.
D.: Oh?
M.: I'm so tired all the time. This job is getting on my nerves.
D.: Getting on your nerves?
M.: Yes. It seems I have so much to do all the time. Then, on top of it all, being a union steward has its headaches, too. They think you are a magician and can do anything they ask.
D.: Oh?
M.: Last night when I got home I had three calls from girls about their petty complaints. It's bad enough listening to my brother. You know he is a sick man and has five children to support. I'm trying to help him as much as I can.
D.: I see.
M.: You know I do a little catering on the side and all the extra money I make I give to my brother's family. That's probably the real reason I'm so tired and grouchy all the time. The job isn't so bad, really. It's just all these other things that come up that have me on edge some of the time. Hope I did not bore you with my tale of woe. I feel better now that I have talked to you. I'll try and control this nasty temper of mine, too. I had a feeling you were going to talk to me about it.
D.: What made you feel that way?
M.: I did complain about the grievances and the amount of work and never stopped to think that it was I all the time.
D.: I'm glad you realized what your trouble was. Feel free to talk to me anytime.

Note how little the dietitian actually said during the entire conversation. She was quick to sense that the employee needed someone to listen to her, not to talk to her or to find fault with her. By showing that she was interested and concerned, the dietitian encouraged the employee to talk about her personal problems and in doing so to find solutions to them. This is not only a wonderful example of non-directive, permissive counseling; it is an indication of a crying need in our highly efficient organizational society, the need for supervisors who have time to listen and who want to listen, calmly, patiently, and with empathy. The dietitian reported that thereafter the employee was more pleasant, happy, and efficient.

Conclusions and Recommendations

From this study and analysis of 396 anecdotal incidents involving the listening of hospital dietitians certain conclusions can be drawn. (a) It is evident that, though hospital dietitians may be somewhat better listeners than the average, they are nonetheless human beings caught up in the complex operation of an organization and are at times hapless victims of the system under which and in which they work. (b) The success of their face-to-face oral communication seems to be crucial in their working life. (c) By their listening, they are known no less than by their speaking; as supervisors they are continually sending and receiving messages from a great number and variety of people. (d) Their listening behavior is a matrix of attitudes and skills. (e) The quality of listening is influenced by the status of the person speaking and the nature of the message.

In light of these findings, the following recommendations are in order: (a) In recruiting and selecting persons to become hospital dietitians, careful consideration should be given to their human relations, their attitudes toward others, and their sense of social responsibility. To be a good supervisor, the dietitian must be a good listener; and to be a good listener, she must have an inner calm, emotional stability, and an "other-centeredness" which will enable her to think and act in terms of the other person. (b) In the education of dietitians, particularly during their hospital internship, time and attention should be given to the study of their communication behavior. (c) Hospital dietitians need to be given time to be supervisors and com-

municators in the best sense of the word, and their in-service training should include frequent attention to listening and communication problems.

Communication is the circulation system of the hospital through which messages of fact and fancy, hope and fear, acceptance and rejection, friendliness and loneliness flow back and forth ceaselessly. Listening is the heart of the communication process in the hospital; the listening ear, the listening mind and spirit make the hospital not a factory or an efficient machine but a human institution in which bodies are not only made whole again but lives are changed, mended, remolded, and uplifted thanks to the listening of hospital personnel.

References

(1) BIRD, D. E.: This is your listening life! J. Am. Dietet. A. 32: 534, 1956.
(2) JACKSON, J. M.: The organization and its communication problems. J. Communication 9: 158, 1959.

BIOGRAPHICAL NOTES FROM THE HISTORY OF NUTRITION

Daniel Rutherford—November 3, 1749–November 15, 1819

Nitrogen balance studies continue to be of major interest in nutrition research and are an index of over-all nitrogen retention in the body. However, such studies are not as reliable an indicator of protein requirement as was once assumed. Boussingault, in 1839, was the first to conduct nitrogen balance studies, using as his "subjects" a lactating cow and a horse. Just the year before, Mulder had introduced the term, "protein." We must go back sixty-six years earlier to find the first detailed study which showed the existence of a new gas clearly distinguished as different from carbon dioxide which Black had described and called "fixed air" in 1756.

Daniel Rutherford, in his dissertation for the medical degree (1772), identified this new gas, which is now called nitrogen, but to which he gave no name; he supposed it was "atmospheric air as it were united with and saturated with phlogiston." Cavendish had done similar experiments at an earlier date but had not published his results, and Priestley had described the same observations and viewpoints about six months before Rutherford's dissertation was published. Priestley, however, was not as methodical nor as exact in his work as Rutherford, who is usually credited with the discovery of nitrogen.

Daniel Rutherford was born November 3, 1749, in Edinburgh, the second son of a physician, John Rutherford, and his second wife, Anne Mackay. His early education was received at home and then in a private school. After further study in England, he returned to Edinburgh and received his master's degree from that university and then began his medical studies. His dissertation, a copy of which is in the British Museum, was done under Joseph Black, who assigned to him the study of the residual air remaining when carbonates were burned in air and the carbon dioxide removed. After receiving his M.D. degree (1772), Rutherford spent three years traveling in England, France, and Italy and in 1775 returned to Edinburgh to practice medicine.

Like many of the educated and travelled men of that period, Rutherford had wide interests. He was keenly interested in the classics, English literature, mathematics, and natural science as well as medicine. Sir Walter Scott was his nephew, and Rutherford was physician to the Scott family as his father had been. When the position of Professor of Botany at Edinburgh University became vacant, Rutherford was appointed (1786-1819); he was also made keeper of the Royal Botanic Garden. The same year he married Harriet, the youngest daughter of John Mitchelson of Middleton. In 1791, he was elected a Physician in Ordinary of the University medical faculty.

Rutherford's discovery of the new gas earned him his medical degree but apparently did not arouse in him a desire to continue original investigations. However, he did invent an ingenious type of maximum-minimum thermometer and was the author of a book on botany. He was a fellow the Royal College of Physicians of Edinburgh (1777) and later became President (1796-1798) of that body. He was also a fellow of the Philosophical (later Royal) Society of Edinburgh (1776), and of the Linnean Society (1796), and a member of the Harveian, the Aesculapian, and the Gymnastic Club. He was a man of broad interests and his lectures were models of clarity and fine literary style.

As a child Rutherford suffered from gout and the attacks became increasingly severe in later life; this disease is believed to have been a contributing cause to his death on November 15, 1819, just as he was starting out to visit patients.

REFERENCES Woodward, B. B.: Dictionary of National Biography, Vol. 17, London: Smith Elder Co. 1909; Weeks, M. E.; Daniel Rutherford and the discovery of nitrogen. J. Chem. Educ. 11: 101, 1934.—*Contributed by E. Neige Todhunter, Ph.D., Dean, School of Home Economics, University of Alabama, Tuscaloosa.*

A Study of Dietetic Training[1]

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THE NOTABLE SHORTAGE of adequately qualified dietitians, rising costs of dietary department operations, increased knowledge and continuing emphasis on institutional nutritional care, together with the expanding scope of the administrative dietitian's responsibilities, led to this study.

Procedure

A questionnaire was developed to collect data which would give detailed information pertinent to the foregoing factors. The questionnaire was submitted to hospital administrators throughout New York State who had agreed to participate in the study. One hundred and eighteen completed questionnaires were returned and are represented in the study.

The questionnaire consisted of two parts. Part I was used to obtain basic information regarding the type of financial control, the type of medical service, and the bed capacity of the hospitals. Other data included information on the organization of the dietary department, vacancies in professional and non-professional staff positions, and the educational backgrounds of the professional staff. Information regarding titles, years of experience, and educational backgrounds of the administrative head of each dietary department was also obtained.

The administrative heads of the dietary departments answered Part II, which listed duties related to dietary department functions, such as menu planning, food purchasing, menu item production, service, diet therapy, sanitation, equipment, layout, personnel administration, and other administrative areas. The head of the dietary department indicated which duties he or she performed, which were delegated, to whom they were delegated, or to whom they might be delegated.

The results of Part I, reported here, provide basic information pertaining to the 118 hospitals and their dietary department staffs. A later report will supplement this information with data from Part II in an attempt to find significant factors which may strengthen dietary department administration and on which curriculum changes for professional and non-professional personnel training may be based.

Hospital Data

Ten types of financial control were represented in the 118 hospitals studied.

There were: 1 United States Army, 1 corporation, 2 Public Health Service, 2 individual, 3 state, 4 city, 5 county, 11 church, 13 Veterans Administration, and 76 voluntary hospitals. Sixty-four per cent were supported by voluntary funds.

Eight categories of medical service characterized the hospitals studied. Ninety-eight were general hospitals, 9 tuberculosis, 4 psychiatric, 2 chronic, 2 cancer, 1 geriatrics, 1 orthopedic, and 1 college infirmary. Eighty-three per cent were general hospitals.

The bed capacity of the hospitals ranged from 25 to 2488 beds, as shown in Table 1. Approximately half of the hospitals had a bed capacity under 200, while two-thirds were under 300. Thus, the greatest number provided general services, were supported by voluntary funds, and had a bed capacity of less than 300.

Dietary Personnel Data

Detailed information pertaining to the dietary personnel included: vacancies in budgeted positions in both professional and non-professional categories; and titles, experience, and educational qualifications of the dietary administrative heads.

There were 7446 budgeted positions in the dietary departments studied; 629 (9 per cent) of these were designated as professional staff; the remainder, 6817 (91 per cent), as non-professional staff.

[1]Part I of "A Study of Educational Programs for Institutional Dietitians and Semi-Professional Food Service Personnel" (U.S.P.H.S. W-115-C1). Received for publication August 22, 1960.

TABLE 1 Hospital bed capacity

BED CAPACITY	NUMBER OF HOSPITALS
Under 100	27
100—199	32
200—299	19
300—399	10
400—499	8
500—599	6
600—699	4
700—799	0
800—899	2
900—999	2
1000—1799	7
2488	1

Vacancies existed in 195 (3 per cent) of the total budgeted dietary positions. Of these vacancies, 57 (29 per cent) were in the professional category, and the remaining 138 (71 per cent), in the non-professional.

The educational backgrounds of the 572 employed professional personnel were classified into four categories of the highest level achieved, i.e., high school training, one year of post-high school, two years of post-high school, and college degrees.

Twenty-one of the "professional" personnel had no training beyond high school, 42 had one year beyond high school, 119 had two years of post-high school; and 384 had college degrees, 46 of these holding an additional graduate degree. Six of the professional personnel did not indicate their educational background. Accordingly, 67 per cent held college degrees, 32 per cent had less than a college degree, and 1 per cent did not report.

THE HEADS OF DIETARY DEPARTMENTS

The titles of the administrative heads of the 118 dietary departments were obtained and classified into eighteen categories, as shown in Table 2. It will be noted that most (91) of the titles included the term "dietitian," "dietetics," or "dietary."

The length of experience of the dietary department administrators ranged from one to forty-four years. The distribution of the years of service in the field is shown in Table 3. Eighty-five (76 per cent) of the 112 dietary department heads reporting their length of service in the profession had over ten years' experience.

Analysis of the educational background of the administrative heads of the 118 dietary departments showed that seventy-six (65 per cent) had college degrees. Sixty-one (51 per cent) held membership in The American Dietetic Association and thus were professionally qualified according to the standards established by this Association.

Interpretations

There are vacancies in budgeted positions, both professional and non-professional, which need to be filled. Recruitment is needed for both professional and non-professional personnel. Education and training need to be provided to fill both types of positions. A majority, 384 of the 572 personnel employed in a professional capacity, held college degrees, but 182 had less than a college education and were, therefore, not professionally qualified as defined by The American Dietetic Association. Additional training of this group is indicated.

TABLE 2 Titles of administrative head of dietary department

TITLE	NUMBER
Chief Dietitian	31
Dietitian	20
Chief of Dietetic Service	13
Director of Food Service	7
Head Dietitian	7
Food Service Manager	7
Director of Dietetics	5
Supervising Dietitian	5
Cook, Steward, Housekeeper	5
Administrative Dietitian	4
Director of Dietary Department	4
Director of Nutrition	2
Administrator, Superintendent	4
Chief of Hospital Food Service	1
Dietary Supervisor	1
Dietary Department Head	1
Registered Nurse	1

There is a wide variation in titles, although there is a marked tendency to use the term "dietetics," "dietitian," or "dietary" in denoting the administrative head of the dietary department. The evident use of these words reflects the influence of the professional aspect of The American Dietetic Association.

It would seem that a ten-year period of experience tends to develop and to hold professional personnel in the administrative headship positions.

Recommendations

Recruitment should be initiated for training and for filling positions of both professional and non-professional personnel. Scholarships should be established to provide opportunities for upgrading persons already in the field and for training additional personnel at both the professional and non-professional levels.

TABLE 3 Years of experience of administrative heads of dietary departments

YEARS OF EXPERIENCE	NUMBER OF DIETARY DEPARTMENT HEADS
1 through 5	12
6 through 10	15
11 through 15	21
16 through 20	20
21 through 30	32
31 through 44	12
Not ascertained	6

Advantages to be derived from long-term experience should be defined in filling administrative headships and for use in recruiting appropriately trained personnel.

Responsibilities of headship should be defined in order to delegate lesser responsibilities to other professional and to non-professional personnel.

A standardization of titles based on professional qualifications would assist in determining merit rating and salary grades and would broaden and strengthen concepts of the dietitian's professional work.

Conclusions

Continued definition of the expanding scope of hospital dietary department administration has significant value to the hospital field and to the dietetic profession.

Continued emphasis on recruitment and on expanding our scholarship programs is indicated. Appropriate means for the support of these programs should be solicited.

Continued study and revision of the college curriculum for the field of dietetic administration would assist materially in providing qualified professional personnel for the future.

The coordinated interest and support of The American Dietetic Association, of other related professional organizations, and of educational institutions are essential in maintaining and in improving the training and educational programs and the professional standards of this important segment of hospital medical service.

References

(1) AUGUSTINE, G. M., MCKINLEY, M. M., AND GALSTER, M. D.: Developing criteria for institution management curricula. J. Am. Dietet. A. 30: 458, 1954.

(2) BLOETJES, M. K.: A study of the professional work of, and the training program for, Danish hospital dietitians. Unpublished Ph.D. thesis, Cornell Univ., 1953.

(3) CARROLL, S. C.: Status of dietitians in the hospital. J. Am. Dietet. A. 35: 1027, 1959.

(4) DAZA, N. V.: An analysis of required courses in institutional management at Cornell University and their relations to the duties of the hospital dietitian. Unpublished master's thesis, Cornell Univ., 1956.

(5) GILLAM, S. M.: A survey of the hospital dietitian and her job. J. Am. Dietet. A. 16: 485, 655, 1940.

(6) GODFREY, G.: Problems in the college training of the dietitian. J. Am. Dietet. A. 17: 639, 1941.

(7) Health Careers Guidebook. N.Y.: Natl. Health Council, 1955.

(8) STEPHENS, G. F.: The part played by the dietitian. Modern Hosp. 73: 108 (Oct.), 1949.

(9) The Outlook for Women in Dietetics. U. S. Dept. Labor, Women's Bur. Home Economics Occupations Series, Bull. No. 234-1, 1950.

(10) WILDER, R. M.: The profession of dietetics. J. Am. Dietet. A. 26: 497, 1950.

The A.M.A.'s Position on Formula Diets

Total dependence on complete formula diets does not constitute a rational approach to weight reduction and weight control on a long-term basis, according to a statement by the Council on Foods and Nutrition, published in the May 6, 1961, issue of the *Journal of the American Medical Association.*

"The formula diet appears to be an effective means of weight reduction, if adhered to," the Council's statement said. "Despite this, there is reason to believe that such a program does not constitute a rational approach to weight control in the seriously overweight. . . The formula *per se* is certainly not a panacea for obesity. Furthermore, self-medication has no more place in the treatment of extreme obesity than in any other medical disorder. A physician is better qualified than the patient to recognize the factors which play a part in a given weight problem, including psychological factors, and to handle problems that occur during a weight reduction program as they arise.

"When weight reduction must be considered a long-term procedure, education of the individual to the faults of his past dietary practice is essential. Only the dietary program which results in permanent weight loss and lifetime control of weight will be a satisfactory one."

In the opinion of the Council, "excessive rates of weight loss or large fluctuations in weight in obese individuals who restrict their caloric intake excessively or spasmodically may be undesirable."

In an accompanying editorial, Philip L. White, Sc.D., Secretary of the Council, said that in a self-prescribed weight reduction program, the patients' psychologic management, and education toward correct dietary habits is "impossible . . . Many users of the formula diets thus are doomed to the on-again, off-again, down-again, up-again paradox of self-treatment."

Diet Therapy and Nutrition in Nursing Tests[1]

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THE NATIONAL LEAGUE FOR NURSING provides testing services for a number of groups. These services include selection and achievement tests for schools of professional nursing and practical nursing, and licensure tests for state boards of nursing to use with professional nurse and practical nurse candidates. Nutrition and diet therapy questions are incorporated in the licensure tests as well as in all of the clinical nursing tests offered to schools. These include tests developed for practical nursing students, for students in basic professional nursing programs, and for graduate nurse applicants to nursing programs in colleges and universities. In addition, a separate test in nutrition and diet therapy is available to basic professional nursing programs, and one of the practical nursing achievement tests provides a separate section and subscore on this subject.

All of these tests are developed in close cooperation with the schools or boards that will use them, with experts in the clinical or subject matter field working with staff in the initial construction. For example, on licensure examinations, the state boards of nursing and appropriate committees of the American Nurses' Association assume responsibility for both the initial planning of the tests and the review of drafts, as well as for the nomination and appointment of subject matter experts to work on the tests. Every question that survives initial drafts and is included in the final form of a state board test has been scrutinized and, in effect, voted on by the state boards of nursing, as well as having been found to be statistically discriminating.

Developing an Achievement Test

In 1961, work will start on a test to replace the current NLN Achievement Test in Nutrition and Diet Therapy, which is used by basic professional nursing programs. The present test was published in 1957. The general steps of development of the new test, which will be the same as for any other NLN achievement test, are:

INITIAL PLANNING AND CONSTRUCTION

Opinions are obtained from committees, other groups, and individuals, regarding the scope and content of a proposed test. Sometimes a questionnaire survey of opinions of school faculties is desirable to determine such matters as the degree of integration of content that schools will find most useful. Experts in the subject area are then invited to assist in blueprinting the test and constructing an initial draft of questions, and additional groups are brought in as necessary to develop the test further. Each group works for a week with the NLN Test Construction Unit staff. The Interorganization Committee of The American Dietetic Association and the National League for Nursing has suggested experts to work on the proposed new test in nutrition and diet therapy.

CONTENT VALIDATION

The initial draft of a test may include about two hundred questions. The content and implications of each question are checked in recent publications when this is possible, and sometimes with consultants; then a draft of the test is distributed for review. In the case of the Nutrition and Diet Therapy Test, about one hundred fifty basic professional schools of nursing will be invited to study and criticize the test in early draft, and members of the Interorganization Committee will also be asked to participate. Each respondent is asked to indicate for each question: (a) the correct answer, (b) whether the question is of high, medium, or low value, and (c) whether it should be included in the test as is, revised, or omitted entirely. A space for comments is included beside each question. In many responding schools, faculty members work in groups and spend many hours reviewing a test. Such groups often write that the process of review is a useful and interesting experience.

All of the review data are compiled and studied

[1]Presented at the 43rd Annual Meeting of The American Dietetic Association in Cleveland, on October 19, 1960.

carefully as a basis for the development of the next form, the experimental form, of the test.

EXPERIMENTATION AND STANDARDIZATION

The experimental form of an achievement test is administered to students in appropriate types of programs to obtain data for item analysis and initial norms. The Nutrition and Diet Therapy Test, when it reaches this stage of development, will be taken by about one thousand students in basic professional diploma programs and several hundred students in basic professional baccalaureate programs. Separate data on item analysis will be obtained for these two groups and separate norms will be developed. On the Nutrition and Diet Therapy Test now in use, the mean score of students in accredited basic baccalaureate degree programs exceeds that of students in accredited basic diploma programs by about six questions, or 5 per cent of the questions in the test. Such a difference makes separate norms of interest but does not necessitate separate tests for the two groups.

Item analysis also provides information on the difficulty of each question and the extent to which each question contributes to the measurement of what the test as a whole measures. The less useful questions are deleted on the basis of this information, and the final form of the test is developed and published.

Testing in the Integrated Curriculum

The question may be asked: With the trend toward integration in nursing curricula, is there need for a separate test in nutrition and diet therapy? In answer, it should be pointed out that there is need for evaluation of student attainment in all crucial subject areas. The curriculum aims at synthesis—ultimately synthesis of knowledge in the student's mind, and, as a mechanical aid to this, synthesis of subject matter in curriculum structure. The evaluation program, on the other hand, aims at finding out, by analysis.

The more the curriculum is integrated, the more the faculty must make sure that the evaluation of important ability areas is not being slighted. If the nutritional aspect of the care of patients is no longer taught as a separate subject, but is integrated in broad strands of clinical education, there remains a real need for a separate evaluation of attainment in this area. The student who is superior in human relationships (or pharmacology, or technical procedures) but deficient in her understanding of nutritional needs (or medical asepsis, or physiology) might get an above-average score in an integrated test and still be unsafe as a practitioner because of her deficiency in a single area. This does not mean that separate national standardized tests can or should be provided for every possible division of subject matter; it does mean that the school faculty must be responsible for seeing that the student's attainment is evaluated for all important ability areas.

The content of a test should reflect the relative importance of the various abilities it purports to measure. That is to say, the more important an ability is, the more questions should be devoted to that aspect. Each question developed for an NLN test is coded according to the abilities it measures, and every effort is made to have an appropriate balance in content. Nutritional aspects of care comprise 13 per cent of the questions in the current Medical-Surgical Nursing Achievement Test and 11 per cent in the current Obstetric Nursing Achievement Test; both of these tests are for basic professional nursing programs. These proportions are not arbitrarily predetermined, but grew out of examination of the needs of the kinds of patients whose care is the subject of the clinical tests. Nutritional questions are classified not merely under the general heading of nutrition, but also according to such categories as understanding of normal needs, purposes and effects of therapy, manifestations of deficiency conditions, selection of care in accordance with patient's needs, and chemistry of foods.

Measuring Cognitive Ability

Another way of classifying items is to consider them in terms of the level of cognitive ability they require of the examinee—for example, in ascending order, knowledge of terms, knowledge of facts, understanding of principles, and utilization of facts and principles in solving problems. Categorizing test questions under these headings is not nearly as simple as it might seem, especially when one attempts to separate facts from principles. A helpful definition of a principle is that it is a fact that is useful in explaining other facts. If we see the utility of a fact, it becomes, for us, a principle. It is a fact that fat is lighter than water. But, if we say, "Because fat is lighter than water, persons in certain stages of reducing diets may lose no weight for a period," then our fact has become, for us, a principle. Sometimes a test may be criticized with the comment that it requires knowledge of "just a lot of facts." Such a criticism may be justified; on the other hand, it may be an indication that the critic is not aware of the utility of the facts.

In many cases, one must know the examinees' background to know whether a test question measures ability to apply principles. Suppose that examinees are asked to choose which one of several foods would be suitable for a patient with ulcerative colitis. The examiner would need to know the individual student's previous experiences to judge whether the student who selects the correct response has applied a principle or has merely selected a food

she has seen served to patients with this condition. The teacher may or may not have this information about each student. The national test maker, obviously, cannot have it. But, by including large numbers of specific problem situations in a test, one can be reasonably certain that some of them will be new to many examinees.

The national test maker, it must be confessed, soon learns that many teachers are reluctant to have their students faced with "strange" problem-situations in tests. A good general rule, nevertheless, for teachers or other test makers is this: to test for application of principles at the highest level, do not ask questions about principles; ask questions about very specific problem situations that the students are unlikely to have met, but which require the desired understandings for working out solutions.

The National League for Nursing strives to provide tests and testing services that will be most useful to schools and state boards of nursing. That the attempt is successful to a degree is indicated by the fact that in the achievement test unit alone, about 300,000 answer sheets are scored each year. The aims of the Testing Service are in line with the over-all philosophy of the League, which is a service organization attaining its goals for the improvement of nursing service and nursing education by providing assistance to communities and agencies.

We welcome your help. If you are a user of the present Nutrition and Diet Therapy Test, do send us your ideas about ways to improve the next one.

Olive Oil Through the Ages

Olive oil, as we know it today, has had an important role since the beginning of recorded history, both as a food and as a medicine. The Pharmacographia of Fluckiger and Hanbury published in 1874 in London described the olive tree as a native of Palestine and probably Asia Minor and Greece. It was introduced in the remote past into North Africa and Spain. It is presently cultivated in Algeria, Spain, Portugal, and southern France. It was carried to Lima, Peru, in 1560, and from there spread to the coastal valleys of Chile.

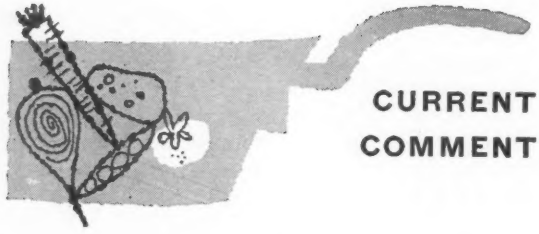
Theophrastus, in 370 B.C., said that the oil had been known since earlier times, both as a food and as an ointment, and Biblical mention of the uses of olive oil are too numerous to list. Dioscorides, in the first century A.D., cited olive oil as a substance for keeping the body from being easily chilled with cold, and making the body more ready for performance of actions. He also stated that it is "good for the belly and is of good faculty dulling the force of exulcerating medicines. It is given against poisons so it should be taken immediately and vomited up again. It purgeth. It is given also profitably to such as are troubled with the 'Tormon' and it casteth out worms. It is a good ointment to sharpen eyesight."

Of the uses of the olive, Gerarde wrote in 1597: "The unripe olives are dry and binding. Those that are preserved in pickle do dry up the overmuch moisture of the stomach, they remove the lothing of meate, stirre up an appetite. The branches, leaves, and tender buds of the olive tree do coole and dry, and especially the wilde olive. The same do staie St. Anthonie's fire, the shingle, night wheals, carbuncles and eating ulcers. The oil of ripe olives mollifieth and assaugeth paine, dissolveth tumours or swellings, is good for stiffness of the joints and against cramps. The oil of unripe olives, called omphacenum Oleum, doth staie and dry away the beginnings of tumours and inflammation, cooling the heat of burning ulcers and exulcerations."

The London Medical Dictionary of 1819 stated that the fruit (of Olea) "hath a bitter, austere, disagreeable taste, but when pickled proved less ungrateful and is supposed to promote an appetite, assist digestion, and attenuate viscid phlegm."

The oil, according to the Pharmacographia, is variously called Oleum Olivae, salad oil, virgin oil, and Olea Europea. Seventy per cent of the fruit is oil, the chief constituent of which is olein or triolein. Studies of the oil made by Chevreaul in 1820 led him to believe that the solid part of olive oil is margarin. Heintz, in 1952, showed margarin to be a mixture of parmatin and other compounds of glycerin and fatty acids. Collett in 1854 isolated palmitic acid from olive oil. Benekt discovered in it small quantities of cholesterin.

The oil is not mentioned as used for medicinal purposes in modern pharmacopoeias. However, its recent use in radioactive form in diagnostic studies of intestinal fat absorption would indicate that it is an important tool in current scientific research, as well as a dietary pleasure to many.—*By Hazel E. Parry. Excerpted from* The Sunflower *15:5 (December), 1960.*



CURRENT COMMENT

Guidelines for Teaching Nutrition and Diet Therapy to Nursing Students[1]

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EARLY IN 1960, the National League for Nursing published *Guidelines for Teaching Nutrition and Diet Therapy in Schools of Nursing* (1). This was material developed by a group of Maryland nurses, nutritionists, and dietitians and was designed to meet a need which members of both the Maryland League for Nurses and the Maryland Dietetic Association knew existed in their schools.

The need arises from the vital and mobile nature of nursing education today, in which a continuous re-appraisal of aims and goals, methods, and evaluation procedures characterizes the activities of the faculties of nursing schools. This re-appraisal is shared by the dietitian for, as nutrition receives increasing emphasis in the nursing curriculum, more dietitians each year are turning to nursing education as a challenging career and are joining the nursing faculties as full-fledged members.

Our professional publications, both national and state, have reflected the growth of this interest. We have had many fine reports and papers in these journals, as well as numerous accounts of workshops, projects, and programs, either for dietitians alone or with nurses working in the field. All of these have been valuable, not only to the dietitian who teaches, but also to the dietary staff whose cooperation is essential if opportunities for the nursing student to practice the basic knowledge and skills in nutrition are to be provided in authentic and realistic situations.

Ultimately, however, a program in nutrition education must be purely individual for each school, determined by its philosophy concerning the education of its students. What the group felt would be helpful, then, was a guide which could be used by nursing faculties in planning and evaluating their curricula and by dietitians in carrying out these broad plans in the teaching and practice of nutrition and diet therapy. Such a guide should be basic, flexible, and yet specific enough to be suggestive and practical. It should not prescribe course hours, course outlines, or plans for clinical experience . . . these are prerogatives of the school itself.

Background of Mutual Interest and Cooperation

Before examining the form and content of the *Guidelines* and suggesting ways to use it, I would like to tell you something of the groundwork which made this publication possible and of the committee which developed it.

In any major project in which representatives of different professions cooperate, the success of the effort largely depends on the background of professional acquaintanceship, mutual efforts, and successful activities which the groups have established. Such a background had been established in Maryland.

In 1956, the Maryland Dietetic Association initiated a conference of teaching dietitians, at which recent trends in nursing education were discussed, and the recommendation was made that the Association appoint a five-member planning committee, charged with the task of liaison between the dietitians and the Maryland League for Nursing. The committee consulted with Alice Sundberg, at that time Chairman of the Maryland League for Nursing. Tangible results were the invitation to a meeting of the League on clinical teaching, and subsequently a request by the League's Committee on Diploma and Associate Degree Programs to plan a program concerned with teaching nutrition.

Working as one group, dietitians and nurses planned an all-day meeting which explored two major areas of interest. The first was "Determination of the Role of the Nurse in Nutrition and Diet Therapy, and the Methods and Materials She Will Use." In the presentation, situations were dramatized in which the nurse must use nutritional knowledge. Graduate nurses and nursing students, dietitians and nutritionists wrote the skits and acted in them. The second area was "Newer Methods of Incorporating Nutrition and Diet Therapy into the Nursing Curriculum." This program took the form

[1]This is a report of a project of the Joint Committee of the Maryland League for Nursing and the Maryland Dietetic Association, composed of the following members: Virginia C. Conley, R.N., *Chairman*, Associate Professor and Chairman, Baccalaureate Program, University of Maryland School of Nursing; Ruth Dyson, Assistant Professor of Nutrition, University of Maryland School of Nursing; Elizabeth Edmands, R.N., Instructor in Nursing, School of Hygiene and Public Health, Johns Hopkins University; Mary V. R. Edmonds, Instructor in Nutrition, Union Memorial Hospital School of Nursing, Baltimore; Sister M. Edmund, R.N., Educational Director, St. Agnes Hospital School of Nursing, Baltimore; Eleanor McKnight, Chief, Division of Nutrition, Baltimore City Health Department; and Inistore Godfrey, former Nutritionist, Baltimore City Health Department. Presented at the 43rd Annual Meeting of The American Dietetic Association in Cleveland, on October 19, 1960.

of a symposium, in which five teaching dietitians described their curricula, some newer teaching methods, and plans for clinical teaching of diet therapy (2).

Both in the committee-planning for the meeting and in the meeting itself, many members of both organizations had an unusual opportunity to explore areas of mutual interest, indulge in free discussion of aims, goals, and methods, and exchange specialized knowledge. We, of the Maryland Dietetic Association, feel the results have been an improvement in the quality of nutrition education in our nursing schools and warm professional and personal contacts with our nursing faculties.

The State Joint Committee

Thus, in the spring of 1958, when our state organizations received a suggestion from the National League for Nursing and The American Dietetic Association that we form a joint committee to discuss *"Understandings and Abilities Needed by Nurses in Relation to Nutrition and Diet Therapy"* (3), not only was it possible to do so with alacrity, but all the factors which insure successful cooperation were present.

The committee consisted of six members—three from the Maryland League for Nursing and three from the Maryland Dietetic Association. They represented diploma and baccalaureate nursing programs and public health education. The group first discussed *"Understandings and Abilities"* and set up the over-all objective as "Knowledge of, and ability to apply principles of nutrition and diet therapy in the nursing care of patients." The *"Understandings and Abilities"* were revised and expanded to form objectives contributing to the principal aim.

At this point, the committee realized how valuable the material would be to colleagues, if it could be enlarged to include suggestions for achieving these objectives. They appreciated, also, the importance of sharing this work with as many others as possible, so that the guide would reflect a wide variety of experience and concepts and not be limited in content and application.

Consequently, the group circulated the basic material, consisting of contributory objectives and expected behavior changes, and asked for suggestions for content and learning activities. Finally, in October 1958, at a conference of nursing instructors, nutritionists, and dietitians held during the annual meeting of the Maryland League for Nursing, the *Guidelines* were the basis for discussion.

The Guidelines *Are Published*

The final publication, then, represents not the thinking of a small group of specialists, but the contributions of professionally trained workers in many situations and from widely differing types of nursing schools. The language is simple and clear, the form is concise, and the suggestions are as practical as possible. There are seventeen objectives contributory to the principal objective stated above. These are listed in the first of four columns. Opposite each objective is the material which develops it: column 2, "Expected Behavior Change"; column 3, "Content–Suggested"; and column 4, "Learning Activities–Suggested."

In "Expected Behavior Change" are indicated changes in the daily professional and personal life of the student which should result from achievement of the objective under discussion. The suggested content, while not intended to be exclusive, was planned to delimit the broad field of nutrition; the nurse needs to make effective use of nutritional knowledge, but too often we have attempted to teach too much. Suggested activities could have been so numerous that the publication would have been unwieldy, and it was necessary to limit these to just a few in each category which would indicate opportunities for practice in the courses, in all clinical areas, and in the community.

Examples of the Objectives

Some examples of the objectives will serve to illustrate the form and use of the *Guidelines*.

One of the most basic of objectives is "Knowledge of the nutritional requirements of individual patients as an important aspect of their health." The behavior change we would expect as a result of this knowledge is: "She exhibits her knowledge and understanding of the nutritional needs of individual patients through her attention to the patient's dietary habits." The content suggested is: "Nutritional needs of patients during illness and in health." Suggested learning activities include: "Participate in laboratory nutritional experiments and studies on rats. Prepare diet histories of hospital patients and those attending out-patient clinics. Compare findings with National Research Council's Recommended Dietary Allowances."

A second example is: "Ability to perform certain nursing activities which serve as a means for establishing and maintaining adequate nutrition of patients with certain abnormal physical and/or mental conditions." The expected behavior change is: "She can provide appropriate nursing care to patients who must receive nourishment in other than the usual method of ingestion." The suggested content is: "Nursing care of patients with gastrectomy, laryngectomy, cleft palate, of patients receiving intravenous feeding and retention enema, and of infants who are fed by means of gavage." The suggested learning activities are: "Give nursing care to patients who have gastrectomy, laryngectomy, cleft palate repair. Prepare and give pre-

scribed tube feeding. Administer prescribed oral, intra-muscular, and intravenous (if appropriate) dietary supplements. Prepare formulas and gavage infant."

A final example illustrates an area which easily engages the student's interest and frequently converts her to enthusiastic nutrition practice. It is: "Ability to participate in community and professional activities designed to promote better understanding of the general food situations and local nutritional problems." The expected behavior change is: "She participates effectively in community and professional activities by keeping abreast of nutrition problems on a local or national level." The suggested content is: "Identification of nutritional problems and their causes on local, state, and national level. Community agencies designed to assist in providing adequate diets." Suggested learning activities are: "Participate in prenatal class in maternity clinic. Participate in nutrition instruction in out-patient department. Attend and participate in local and/or state professional and community meetings concerned with food and nutrition problems."

From these examples, it can be clearly seen that the planning of the program in nutrition and diet therapy, which *Guidelines* is intended to facilitate, is the responsibility of many members of the nursing school faculty. It presupposes the exploration of the school's philosophy, aims, and major objectives by the dietitian or nutritionist with other faculty members. It cannot be successful if there is no basis of shared activities—in faculty meetings and committees, in patient care, and even in social events—so that the nursing education group recognizes the dietitian's interest in the patients and the students, understands her ideals, and trusts her judgment.

Benefits from Using the Guidelines

Granted these conditions, *Guidelines* provides a take-off point from which to begin discussions of what the student should know in nutrition and diet therapy and how and where she can apply her knowledge. Faculty discussions of the content and learning activities will not only stimulate suggestions from all concerned, but will result in a wider spread of responsibility for the program. No nurse questions the importance of nutritional knowlege and practice, but she is not always aware of the many opportunities for improved care of her patients through the application of these skills. If the faculty, because of these activities, participates more fully in the program, the ultimate benefits to the student are immeasurable.

Use of *Guidelines* will also strengthen the position of the teaching dietitian. Since its origin is mutually nursing and dietetic, she is not placed in the position of "pleading for special causes" and may be firm in insisting on the inclusion of material and activities she considers essential for the student.

We mentioned earlier that more dietitians each year are devoting their full time to teaching; many of these are young dietitians, adequately prepared scholastically, but inexperienced and unsure of themselves in planning and executing a major program. The highly individual nature of each school and the complexity of the hospital situation can be very disconcerting. For them, *Guidelines* can serve as a bracer.

On the other hand, the person responsible for teaching may be a dietitian who has been inactive because of marriage and children, but now finds that this type of position, whether full- or part-time, is suited to her tastes and family life. Returning to the hospital after a number of years, she encounters many changes in nursing education. Use of *Guidelines*, in conjunction with a study of recent literature, will ease her path and save valuable time.

Nutritionists in public health and community agencies are skilled in teaching techniques, but even for them, the publication will be of value in orienting themselves to the previous nutritional experiences of the student and the younger graduates to whom they give guidance. Even if it should only guide the nutritionist's questioning of the student's previous nutritional activities, it will help to prevent duplication of material and enable the student to obtain maximum benefits from the public health program.

AS AN EVALUATION TOOL

For the dietitian with a basically sound and comprehensive program, *Guidelines* will be most useful as a reference tool when she periodically re-examines her objectives or studies the content of her teaching. Frequently she observes that the behavior changes in a number of students do not meet her expectations. For example, the students may be very observant of their patients' food problems and idiosyncrasies and realize that these factors are affecting their treatment, but they are not referring the problems to the proper person. Referring to the *Guidelines*, the instructor finds that under the objective: "Ability to serve as liaison between the patients and the other professional personnel in interpreting patients' nutritional and dietary problems," it is suggested that the student attend physician's rounds and initiate conferences with the head nurse. Both of these activities, incorporated in her dietary clinical experience (whatever the type of this experience) and performed under the guidance of the dietitian, would overcome the student's reluctance to discuss such problems with other staff members. The nutrition instructor would probably go further and devise activities suited to her own

hospital, such as alerting the students to the schedule for daily dietary rounds and seeing that the therapeutic dietitian is available, at this regular time, for conferences.

What we hope, then, is that *Guidelines* will serve as a basis for cooperative planning in all types of schools of nursing, that it will contribute to improvement in the nutrition and diet therapy practice of nurses, and that it will assist the individual dietitian and nutritionist in their daily work. If it can do these things, then it will help dietitians who teach nutrition and diet therapy to find greater enjoyment, rewards, and prestige in their field.

References

(1) JOINT COMM., MD. LEAGUE FOR NURSING and MD. DIETETIC ASSN.: Guidelines for Teaching Nutrition and Diet Therapy in Schools of Nursing. Natl. League for Nursing Exchange No. 48, 1960.

(2) Newer trends in teaching nutrition and diet therapy to student nurses. Md. Dietet. Assn. Bull. 12: 1 (Oct.), 1957.

(3) COMM. ON NUTRITION IN NURSING EDUCATION, AM. DIETETIC ASSN. and NATL. LEAGUE FOR NURSING: Understandings and Abilities Needed by Nurses in Relation to Nutrition and Diet Therapy. Appendix to the League Exchange No. 48, 1960.

Field Observation with Public Health Nurses for the Nutrition Instructor

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FACED WITH the problem of making nutrition both practical and interesting to nursing students, the nutrition instructor is constantly seeking ways both to keep her own knowledge current and to transmit its dynamic quality to her students. One area in which the nutrition instructor might benefit by broadened knowledge is in public health nursing.

Often, hospital dietitians have contact only with hospital nurses and do not appreciate the nutritional problems which public health nurses are called on to solve. Since the nutrition instructor's background should include some knowledge of the ultimate situations in which her students will work—especially with regard to the opportunities they will have for teaching nutrition, field observation in the company of public health nurses can be most helpful to the instructors. Such experience can be particularly rewarding in instances where nutrition instructors are beginning work in new communities. Since the practice of public health nursing will vary in different regions of the country, such field observations can provide instructors with knowledge of the needs and opportunities of a given community *before* meeting their students.

The author, with a view toward a more realistic approach in teaching nutritional problems, accompanied public health nurses in North Carolina on their home visits and observed their daily routines for four weeks. Of major concern were the types of problems these nurses encountered and the ways in which they dealt with them.

Visits were made to the homes of Negroes, whites, and Indians. Also, since problems vary in different regions and with different living conditions, visits were made in both the north central and western parts of the state, and in homes in cities and towns, as well as in the rural areas. A well baby clinic, a diabetic clinic, and a nursing home were also visited to learn how the public health nurse follows up maternity patients, long-term and chronically ill patients, and children with special problems.

Limited Home Facilities

In more than half of the homes visited, the families had no refrigerator, and only two had freezers. The lack of refrigeration or other means for protecting and preserving foods, of course, had an important bearing on the family's nutrition, since the food obtained must be used almost immediately.

The water supply of most of the families—even urban dwellers—was obtained from an open well. Springs, often long distances from the houses, were used by some. Only one or two of the city families had faucet water from the city source.

Some of the houses were poorly constructed and difficult to heat; consequently, they offered poor protection against inclement weather. Wood stoves were used for cooking and heating. In some homes, sanitary conditions were deplorable, with chickens wandering into the houses from the yards.

The food pattern, which showed little variety, was similar in both sections of the state. Foods served frequently included pinto beans, eggs, pork, and fatback. Fruit and milk were seldom included in the daily menus. The public health nurse stressed the importance of serving eggs and cheese which can aid in providing adequate protein.

[1]The author is grateful to Dr. Elizabeth L. Kemble, Dean, University of North Carolina School of Nursing, for her support and interest in this study, and to the following public health nurses who made the home visits possible: Ida Reid Cohen, Bonnie Roush, Bonita Stockton, Doris Hicks, Rubye Bryson, Nedra Kincannon, Anna Fox, Molly Bell, Margaret S. Roper, Aleise Davis, Lena Sessoms, Ruth Holmes, Jane Smith, Rachel Stevens, Lura Sharpe, Mary Lou Norwood, and to Mildred Barry, formerly Nutrition Consultant, North Carolina Board of Health.

Home-produced foods from gardens and raising livestock provided the major source of food for many of the families; even many of those living in towns cultivated gardens during the growing season. Most of the women indicated that they regularly can fruits and vegetables. Wild fruits and greens were also mentioned as sources of food.

To promote further the use of wild greens, Lena Sessoms, Public Health Nurse of the District Health Department, Chapel Hill, has written a bulletin, "Wild Greens of North Carolina," in cooperation with C. E. Bell, Ph.D., botanist of the University of North Carolina. This bulletin points out that many wild green plants growing in the state are edible and can serve as important sources of vitamin A and ascorbic acid. Among the edible plants listed are: "lamb's quarters," dandelions, poke weed, water cress, narrow-leaved dock, and sorrel. The bulletin gives instructions for gathering, cleaning, and cooking these plants.

Health Activities with School Children

During the school session, the author met monthly with the public health nurses to review the progress of the nutrition program as it related to the patients visited the previous summer. Nutritional and other problems arising in the school situation with which the public health nurses had to deal were discussed, and several projects to improve the children's food intake were planned. An example was that of a fifth grade in one school in which a food-tasting experiment was carried on for a week. During that time, nineteen pupils tasted 271 different foods—an average of twelve per pupil; one tasted forty foods, while another only one.

In another instance, a survey was made of the food the children actually eat during the week to determine what should be included in a nutrition program. The students kept lists of the foods they ate for a week, including the number of glasses of milk they drank, the servings of vegetables and the number of eggs they ate, and the amounts of fruits, meats, and bread. These records were then compared with the recommendations of the USDA's four-group food plan.

A study of the pupils' food likes and dislikes in several grades indicated that more emphasis was needed on green and yellow vegetables, organ meats, sea foods, and whole wheat bread.

Since the diets were low in ascorbic acid, an orange party was held at which the pupils learned to eat an orange in a new way. They seemed to enjoy the experience, and the party helped them to associate the nurse with pleasant things. They were heard to say, "Mrs. Sessoms is the public health nurse who came to our class and had an orange party with us," rather than remarking that the nurse "is the woman who gives the shots."

Teaching Nutrition to Patients

Teaching a patient or family the importance of proper nutrition is at best a slow process. The patient or family must understand the need and reason for a prescribed dietary change, as well as what the new diet encompasses.

With the trend toward early ambulation, and discharge from the hospital, the patient frequently does not understand the doctor's orders and thus is unable to carry them out at home. The public health nurse then enters the picture, helping to solve problems which arise in adjusting a therapeutic diet to the patient's needs. The family's situation and problems must be considered before a diet can be satisfactorily adjusted or the family advised on proper food intake. In teaching the patient, all factors involved, i.e., occupation, cooking equipment, home-produced foods, and even the person's ability to read and understand the instructions, must be considered. If the patient is unable to obtain the required food, the community resources and its institutions must also be considered.

A follow-up plan is needed to see that instructions are carried out. If a hospital makes a referral for such a check, the public health nurse can be helpful. Student nurses make referrals and sometimes even make home visits, although this is not always possible. If a nutritional history can be attached to the referral form, much time can be saved. The public health nurse should also keep a record of the patient's progress and make follow-up reports to the physician.

Summary

The instructor in nutrition in a school of nursing can obtain first-hand information about the living conditions of patients if she accompanies public health nurses on their home visits. She will see for herself how such factors as water supply, refrigeration, availability of home-produced foods, and food habits affect the patient's nutritional welfare. She will also learn to appreciate some of the difficulties such nurses encounter, such as traveling over almost impassable roads and climbing over or under barbed wire fences to reach the patient's home, only to find the patient is not at home when she arrives.

Through such experience, the instructor in nutrition can gather material to help her make the future situations her students will encounter much more realistic and meaningful to them. She will be able to help them grasp the concrete problems of nutrition they will meet in their future professional lives. Conversion of nutritional practices and principles into satisfactory answers to real, everyday problems can bring to the study of nutrition meaning and usefulness often lacking in a theoretical classroom situation.

Meeting the Feeding Problems in Nursing Homes[1]

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WITH THE great emphasis today on rehabilitation and the expansion of nursing home programs the country over, greater interest must be taken not only in menu construction, planning, and so on, but also in suggesting ways by which this well planned menu can be consumed. We must begin to be concerned about the total picture of nutrition in nursing homes—a picture which I believe includes steps beyond delivering the tray to the bedside or setting a place for the ambulatory nursing home resident at the table.

Perhaps a few words about the types of patients found in nursing homes, and for whom the dietitian is likely to be planning menus, will focus the problem more clearly. Patients or residents in a proprietary home are those of any adult age with some of the following diagnoses or conditions: cerebral palsy, multiple sclerosis, Parkinson's disease, strokes and other cardiovascular diseases, arthritis, fractures—especially hip fractures, diabetes mellitus, cancer, obesity, malnutrition, old inactive tuberculosis, genito-urinary diseases, chronic alcoholism, senility, and extreme old age.

Admission age for philanthropic homes is set at the retirement age of sixty-five years and up, and admission policies are quite strict as to physical and mental health. Thus, in such homes, most of the persons for whom dietitians will be planning menus will need nothing more than the normal, adult-type diet. Except for multiple sclerosis and cerebral palsy, the residents who require major nursing care and specialized service will have the same problems and diagnoses as the patients in a proprietary home.

In addition to menu planning, purchasing, storage, equipment, and sanitation in the kitchen, which the dietitian normally supervises, the rehabilitation factors play a more important role in a nursing home program than is immediately evident. Until now, the dietitian has confined herself more to the regular aspects of food administration and nutritional therapy in the nursing home. As a public health nurse, it is my opinion that a closer union between the nursing and dietary departments will serve to utilize some of the techniques of which we are already aware, or perhaps are practicing in a small scale.

Serving a nutritionally adequate and colorful meal to a resident or patient is common practice, but I have found that not much consideration has been given to the actual consumption of this food. We must bear in mind that our nursing homes have non-professional staffs, many of whom have limited opportunities to carry out any rehabilitation program during mealtime. It is at this point that a dietitian can be of assistance by suggesting ways to teach the staff the salient facts and procedures which may ultimately give a patient untold happiness when he achieves independence in that important activity of daily living, eating. To carry out these procedures, the dietitian will need more concentrated time in the dining area.

Some procedures may involve positioning of the patient's body; some may involve an adaptive utensil, such as a built-up spoon or fork, or merely a suction cup to stabilize the plate or bowl. It may be the height of the table or atmosphere of the area in which the patient takes his meals that has an effect on his interest in eating.

Concrete Suggestions

At first glance, it may seem that the dietitian may be delving into a field beyond her training, but she should be aware that certain opportunities exist before the actual eating process takes place. In a rehabilitation hospital, some of the following suggestions are advised in keeping with the objectives:

Positioning. Positioning of the patient's body, a procedure performed by the nurse, is important when teaching self-help techniques to patients with such conditions as cerebral palsy. If the trunk is tilted slightly forward, with the chin down, the buttocks set well back in the seat, and if necessary, the elbow stabilized with an arm rest, the chewing and swallowing procedures will be more effective and the choking tendency reduced.

Food Consistency. Again, with the cerebral palsy patient, the type of food has a tie-in with ability to articulate. Since mashed and ground foods do not supply normal exercises for muscles to produce articulation of speech, it is advised to adhere as closely as possible to a normal diet. This factor is overlooked in the menu planning in many nursing homes. In fact, many times it is overlooked in dietary prescriptions. Chewing with the lips closed and drinking through a straw are good muscular exercises, helpful in speech practice. It can also control "drooling" and make the patient more socially acceptable.

Rehabilitation Eating Aids. Depending on the extent of the involvement of the muscles of the upper extremities, it may be possible that the patient can eat, using only a leather cuff to hold the fork or spoon. Many patients have found the

[1]Presented at the 43rd Annual Meeting of The American Dietetic Association in Cleveland, on October 19, 1960.

"spork," or combination fork-spoon, to be of great help. If a swivel spoon is used, it should have a lock to keep the bowl from tipping too far. The child-size swivel spoon is generally too small for adult use. An attachable metal plate-rim will help get the food on the spoon. Occasionally, in a quadriplegic, if a patient has the use of the opposite hand, a food pusher properly angled can be of help. Suction cups will hold plates firmly.

I have seen very few aids used in nursing homes. The attitude is that it is much easier for someone to feed the patient quickly.

Three Problem Areas

My observations have indicated that in three areas, problems seem to rank high:

Time Element. Let me emphasize that most of the handicapped patients with feeding problems must have a bit more time with their meals; that every moment spent working with the patient in training in self-feeding in the beginning will, first, save untold time for the staff later, and second, will produce a happier, more independent resident. As it is now, the cook, together with the nursing personnel, is usually anxious to get the meal served, the food eaten, and the dishes washed in short order so that preparations for other activities can take place.

Decubitus Ulcers. Much has been written and done in regard to decubitus ulcers, which are a problem when disability and chronic illness have reduced the patient to a bedfast state. Our proprietary nursing homes inherit some severe cases of bedsores; some come from private homes, some from hospitals. Here again, we find an example of what good nutrition and excellent nursing care can do after admission to a high-standard nursing home.

I have seen some seemingly hopeless patients completely recover. An aged ex-teacher was admitted to one of our fine nursing homes. She had an emaciated body, with large decubitus ulcers on both hips, coccyx, and heels. It was predicted that death was imminent. After she had been for several weeks on a liquid diet, with vitamin and mineral supplements, and intensive nursing care, the physician prescribed an addition of foods *ad libitum*. Cooked fresh liver and kidneys were blenderized, mixed with brown rice and curry powder, and served in addition to the regular liquid diet. After two years, although the patient is still bedfast, the bedsores are healed, her general condition is much better, and her memory is returning.

Senility. The great proportion of the ambulatory aged in a nursing home consist of those with various degrees of senility. "Senility," as the term is used here denotes abnormal mental aging. "Senescence," on the other hand, is defined as normal mental aging. The senile group present quite a care problem in their own homes, apartments, or hotels, due to mental confusion, varying stages of abnormal forgetfulness, paranoid attitudes toward others, agressiveness, and agitation. One factor seems to be a common denominator—the food problem.

It is true that these people are generally admitted to the nursing home in a malnourished condition. Some have lived alone and had diets reduced to bread and tea or coffee for an indefinite period before action for nursing-home placement was taken by a guardian or an attorney. This is the group which generally cause difficulty for the operator of a home because they relate tales of being starved by the operator, food withheld, insufficient amounts of food, and so on, to the staff at out-patient clinics, to unwary strangers visiting in the nursing home, and to relatives who are not acquainted with the senile problem. It is thrilling to note improvement in mind as well as body in some of these patients after a time in a good nursing home. We know that many factors—social, spiritual, emotional, and physical—all work together to produce this improvement. We now see some conditions which, in the past, were considered irreversible, showing signs of improvement under proper diet therapy, physical and occupational therapy, and medical and nursing care.

Patients who have suffered severe regression in mental health have generally become quite untidy in eating. Grouping these patients in one area, at small tables and with someone to supervise them, has been effective. In some homes, a mentally alert person who loves to do this service can be assigned to these tables. Occasionally, one of the staff should visit each table, guiding the mealtime activities.

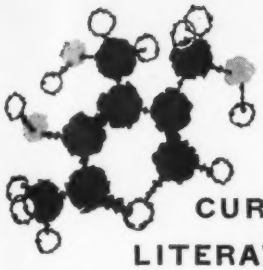
Eating can be a pleasure and give some sense of accomplishment if mealtime aids, positions, atmosphere, and location can be suggested to the nurses and operators by the dietitian advising them in the mechanics of patient feeding.

The Clinic Dietitian's Dilemma

In answer to the dietitian's suggestion that she write a sample day's menu, one obese patient wrote:

A.M.: Coffee
Noon: Almost anything
P.M.: Same

—Bertha Brandt, Nutritionist, Chicago Lying-In Hospital



CURRENT LITERATURE

Contributed by Janette C. Carlsen, The Johns Hopkins Hospital, Baltimore; Clara Karl Frederick, Lombard, Illinois; Margene A. Wagstaff, Elmhurst, Illinois; the following dietetic interns from the VA Center, Los Angeles: Phyllis Bollman, Cynthia G. Danielson, Margaret Dorsey, Connie Eckman; Mary Flick, Viola Hardin, Karen Mund, and Margaret Norton; the following dietetic interns from the VA Hospital, Houston: June Davis, Sally Gilliland, and Janice Worley; and the Journal staff.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES

Vol. 241, April, 1961

*Acute hyperthyroidism in severe diabetic keto-acidosis. M. Lakin, R. F. Bradley, and G. O. Bell.—p. 443.

Hyperthyroidism in Diabetic Ketosis. The simultaneous occurrence of severe diabetic ketosis and acute hyperthyroidism is rare. However, one should heed the warning to consider hyperthyroidism in every case of diabetic keto-acidosis. Evaluation of the cause of keto-acidosis or coma, suggestive symptoms of hyperthyroidism, fever during coma in the absence of infection, persistent tachycardia, and thyromegaly should aid in its early detection. The early recognition and treatment of acute hyperthyroidism may assist in prompt response of the keto-acidosis and facilitate diabetic management. In a recent case, it was thought that Graves' disease was in part precipitated by thyroid medication during pregnancy of a woman with diabetes.

THE AMERICAN JOURNAL OF NURSING

Vol. 61, May, 1961

*Formulas and nutrition. L. O. Lubchenco.—p. 73.

Formulas and Nutrition. The Food and Nutrition Board was unwilling to take a firm stand on the biologic equivalence of the protein of human and cow's milk in its latest revision of the Recommended Dietary Allowances, or to differ from the nutritional viewpoint that recommends only human milk for the first month of life. This author stresses that a mother should be encouraged to breast-feed her baby, even though only for one month. When formulas are used, a flexible feeding schedule of a relatively high protein formula is believed to meet an infant's nutritional requirements. The needs of the premature infant are considered, and it is suggested that the enormous appetites of premature babies indicate a need for nutrients.

AMERICAN JOURNAL OF PHYSIOLOGY

Vol. 200, March, 1961

*Effect of digitalis on active intestinal sugar transport. T. Z. Csaky, H. G. Hartzog, III, and G. W. Fernald.—p. 459.

Digitalis Affects Sugar Transport. Studies done at the University of North Carolina School of Medicine indicate that digitalis and similar drugs inhibit active sugar transport in the isolated surviving small intestine of the frog. It is known that these drugs also inhibit active sodium transport in the red cells, kidney, and surviving isolated frog skin. It was shown that the mechanism responsible for the active transport of carbohydrates in the small intestine does not function in the absence of sodium ions. Thus a link between the sodium and sugar pumps is suggested. This connection may find a functioning sodium pump essential for the function of the sugar pump. If so, digitalis would primarily affect the sodium pump, and the effect on the sugar transport would be secondary.

THE AMERICAN JOURNAL OF SURGERY

Vol. 101, April, 1961

*Eosinophilic granuloma of the stomach. Diagnosis and surgical therapy. D. L. Weeks, Jr., and F. Glenn.—p. 516.

Eosinophilic Granuloma. Eosinophilic granuloma is now readily diagnosed clinically rather than from the pathologic specimen. Symptoms commonly observed include intermittent vomiting, epigastric distress, and diarrhea. These accompanied underweight attributed to "low food capacity," manifested by remaining "full" for many hours after eating. Eggs and wheat-containing foods precipitated this chain of events. The basic pathologic physiology appeared to be some degree of pyloric obstruction. An operation was indicated and the patient returned to his normal activities and adhered to his allergen-free diet.

ANNALS OF BIOCHEMISTRY AND EXPERIMENTAL MEDICINE (India)

Vol. 20, September, 1960

*Nutritive value of a yeast hydrolysate made from distillery sludge. M. K. Rastogi and C. R. Krishna Murti.—p. 227.

*The nutritive value of protein blends having aminoacid composition similar to that of FAO reference protein pattern. K. Joseph, M. N. Rao, M. Swaminathan, K. Indiramma, and V. Subrahmanyan.—p. 243.

Vol. 20, October, 1960.

*The influence of different fats on the growth of vitamin B_{12}-deficient hyperthyroid rats. B. D. Punekar and R. G. Chitre.—p. 269.

Yeast Hydrolysate from Distillery Sludge. A process has been developed for preparing a yeast hydrolysate from alcohol distillery sludge. The preparation is rich in amino acids and vitamins. Its nutritive value was assessed by supplementation experiments using growing rats reared on a poor rice diet. Growth data and histopathologic examination of livers indicated that in addition to supplementing the growth of rats on the poor rice diet, the yeast hydrolysate partially prevented histopathologic changes in the liver of the animals.

Nutritive Value of Protein Blends. The protein efficiency ratios (at 10 per cent level) of protein blends having amino acid composition similar to that of the FAO reference pattern ranged from 2.12 to 2.44 (in four weeks) and from 1.96 to 2.2 (in eight weeks), as compared with 3.02 and 2.40 (in four and eight weeks) for skim milk proteins and 1.97 and 1.70 (in four and eight weeks) for Incaparina. The protein efficiency ratios (at 10 per cent level) of blends of groundnut (peanut), Bengal gram, and soybean, containing 20 per cent skim milk powder, ranged from 2.25 to 2.39 (in four weeks) and from 1.82 to 2.05 (in eight weeks). Fortification of soybean flour with DL-methionine (at 0.6 and 1.2 per cent levels) increased the PE ratio to 2.9 and 2.4 (in four and eight weeks), almost the same level as that of milk proteins. Fortification of groundnut flour with L-lysine, DL-methionine, and L-threonine increased the PE ratio to 2.6 and 2.1 (in four and eight weeks).

Influence of Fats on Hyperthyroid Rats. The effects of butter, margarine, hydrogenated coconut oil, cottonseed oil, and linseed oil added at 10 per cent level to a basal ration on the growth of hyperthyroid rats have been studied. That the improved growth was due to the presence of unsaturated fatty acids is supported by the fact that cottonseed oil and linseed oil increased the growth of rats in a hyperthyroid state. The finding is further supported by a lowered kidney-weight in the hyperthyroid rats fed the cottonseed oil and linseed oil.

ARCHIVES OF PEDIATRICS

Vol. 78, April, 1961

*Management of underweight infants and children. H. R. Litchfield.—p. 151.

Underweight Infants and Children. In this study, forty-four patients, divided into three groups according to age, were treated with nandrolone phenpropionate, a new anabolic stimulant, for a period of from four to twenty-four weeks. Premature infants averaged 58.7 per cent increase in weight over the controls. Children from one and a half to six years of age averaged 17.7 per cent increase in weight, while the seven-to-thirteen-year age group averaged 12.3 per cent. In addition to weight gain, all had increased appetite, vitality, and strength. No undesirable reactions of virilism occurred, and no premature closure of epiphysis or bone ossification was shown.

BRITISH JOURNAL OF NUTRITION

Vol. 15, No. 1, 1961

*Metabolic studies on small and large eaters. G. A. Rose and R. T. Williams.—p. 1.

*Problems in the prediction of protein values of diets. The influence of protein concentration. D. S. Miller and P. R. Payne.—p. 11.

*Basal metabolism in women with obesity and anorexia nervosa. H. Ljunggren, D. Ikkos, and R. Luft.—p. 21.

*Reducing diets. Weight loss of obese patients on diets of different composition. R. F. Fletcher, M. Y. McCririck, and A. C. Crooke.—p. 53.

*Retentions of nitrogen and minerals by babies 1 week old. J. E. Slater.—p. 83.

Metabolism of Large and Small Eaters. From forty young men, six pairs were selected, the members of each pair differing as widely as possible in caloric intake but as little as possible in body weight. Oxygen uptakes were measured basally and during a variety of standard and free-style exercises, and also after a standard meal. In each instance, the two groups gave very similar results. It is concluded that the differences in their caloric intake were not due primarily to any constitutional differences in energy requirements. The large eaters had natural rates of walking consistently faster than those of the small eaters. Possibly this is an index of a general restlessness and pace of activity which may be related to their large food intake.

Protein Concentration and Protein Value. A method is presented, allowing for variations in protein concentration, for the prediction of the protein value of diets from analytical data. For this purpose, it is essential to express the dietary values in terms of the proportion of the energy in the diet contributed by protein.

Metabolism in Obese and Anorexic Women. Basal metabolism, total body water, extracellular water, and body potassium were determined in healthy women, in obese women, and in anorexic women. Intracellular water was calculated as the difference between total body water and extracellular water. Body potassium and intracellular water were considered as parameters of cell mass. It was shown that cellular metabolic activity is normal in obesity and anorexia nervosa.

Reducing Diets. Six women with simple obesity were given diets providing 800 calories daily in which more than half were supplied by protein, fat, or carbohydrate respectively in different sequences. Statistical analysis showed no significant difference in the rate of weight loss on the different diets. There was a positive correlation between the weight lost and the initial weight. After the caloric intake has been decided and minimal nutritional requirements met, the composition of a reducing diet can be determined primarily by palatability and individual choice.

Nitrogen and Mineral Retention by Babies. Retention of nitrogen and minerals by newborn infants was studied. Some were fully breast fed and some received a proprietary cow's-milk mixture which contained more nitrogen, potassium, chloride, phosphorus, calcium, and magnesium than the "average" breast milk. Both groups absorbed 80 to 90 per cent of the nitrogen in their food and retained approximately half. The bottle-fed babies retained 127 mg. nitrogen per kilogram per day more than the breast-fed infants. The bottle-fed babies ingested, absorbed, and retained more potassium and phosphorus than the breast-fed infants, three to four times as much magnesium, and five times as much calcium. It is suggested that the small amount of phosphorus in breast milk limits the retention of calcium and magnesium.

BRITISH MEDICAL JOURNAL

No. 5228, March 18, 1961

*Further experiences in the treatment of phenylketonuria. A. Moncrieff and R. H. Wilkinson.—p. 763.

*Results of treatment in phenylketonuria. S. Coates.—p. 767.

Phenylketonuria: City of Birmingham screening survey. M. M. Boyd.—p. 771.

*The prevalence of anaemia in the community. G. S. Kilpatrick and R. M. Hardisty.—p. 778.

*Hematological findings in non-white sick children in Capetown. P. Lanzkowsky.—p. 783.

Phenylketonuria. The experiences of the past few years suggest that early detection and treatment of phenylketonuria offer a reasonable chance of preventing mental retardation. There are certain difficulties about early detection which should be overcome. More troublesome is the fact that the diet of the actively developing young baby may have to be more generous in phenylalanine, even to the extent of exceeding the normal blood level, if the child is to survive and thrive. Why some babies are more difficult than others is not yet clear. The dietetic control must be most closely followed by serial estimations of phenylalanine levels in the blood. Probably the simplest dietary treatment would be to use the available phenylalanine-free casein preparations but to add more milk than is usual (more than the maximum of 3 oz. daily allowed in older children). Whether more tyrosine and tryptophan should be given is not clear. Alternatives to the present casein-hydrolysates might help with the cost. What everyone working in this field would like to know is whether dietetic restrictions can ever be relaxed. Evidence on this may be difficult to get, although it is beginning to accumulate.

Results of Treatment in Phenylketonuria. Up to October 1960, thirty-five cases of phenylketonuria had been treated at The Hospital for Sick Children since dietary treatment was started in October 1953; thirty-one are discussed. One patient born with average intelligence and treated since she was four weeks old has retained that level up to five years of age. Of twenty-eight cases in which the diet was given a fair trial, twenty-two (79 per cent) showed improvement; in twelve (43 per cent) this improvement was marked—a rise in IQ of 9 points or more—and appeared to be permanent. The reasons for the variations in results are discussed; to some extent, they are attributed to the impossibility of accurate prediction in young babies.

Prevalence of Anemia. A survey to determine the prevalence of anemia has been carried out in over 90 per cent of a random sample of 600 men (300 miners and ex-miners, 300 non-miners) between the ages of thirty-five and sixty-four, and of 200 post-menopausal women ages fifty-five to sixty-four years living in an industrial community in South Wales. Mean hemoglobin level for men was 14.9 gm. per 100 ml.; for women, 13.3 gm. per 100 ml. The miners and ex-miners had a lower serum-iron concentration than the other men. Three per cent of men had hemoglobin levels of 12.5 gm. per 100 ml. or less, and 14 per cent of women had hemoglobin levels of 12 gm. per 100 ml. or less. The majority of the anemic were of the hypochromic type. Further investigation and therapy were offered to those discovered to be anemic. The women responded to iron therapy better than the men.

Hemoglobin in Sick Infants. There have been no previous reports of investigations on hemoglobin levels in sick infants and pre-school children in South Africa and only a few publications of such studies in other countries. Hemoglobin levels were determined on 849 non-white infants and children attending an out-patient department in Capetown. Mean hemoglobin values were even lower than the mean values in apparently healthy infants and pre-school children, among whom the occurrence of low hemoglobin levels has already been demonstrated. The mean levels in the Cape coloreds were lower than in the Africans in almost all age groups. An iron-deficiency anemia was confirmed in 100 infants and children. The fact that none of the cases presented symptoms of anemia despite the low hemoglobin levels emphasizes the insidious nature of onset and the slow progress of iron-deficiency anemia in infants and children. After treatment, parents appreciated that symptoms of anemia had been present prior to treatment.

CIRCULATION

Vol. 23, April, 1961

*Sodium from drinking water as an unsuspected cause of cardiac decompensation. G. B. Elliott and E. A. Alexander.—p. 562.

*Effect of exercise on electrocardiograms of patients with low serum potassium. A. J. Georgopoulos, W. L. Proudfit, and I. H. Page.—p. 567.

Sodium in Drinking Water. Tasteless sodium in water forms a source of perplexing decompensation in otherwise well controlled heart disease. A

survey of 300 samples of drinking water from Southern Alberta, Canada, analyzed for sodium showed that a considerable proportion of well waters contain very high sodium levels, ranging up to 420 mg. per 100 ml. Two instances of recurrent episodes of heart failure at home, which ceased after substitution of a low- for unsuspected high-sodium water supply, are described in this paper. The sodium is present in soils derived from underlying marine deposits of seas that covered the whole of the North Americans plains, in ancient times. It is not readily recognizable by taste, especially as sulphate, and may cause darkening of soil so that its presence remains quite unsuspected.

Exercise and Low Serum Potassium. The effect of exercise on the electrocardiogram of patients with low serum potassium was studied. Electrocardiographic signs of hypokalemia appeared after exercise in all but the two hypertensive patients receiving digitalis. The severity and duration of the changes correlated with the degree of hypokalemia present prior to exercise. Following potassium repletion, exercise did not produce electrocardiographic changes of hypokalemia. It is suggested that hypokalemia can introduce an error in interpreting results of exercise tolerance tests in patients receiving thiazide compounds, when serum potassium is at the low normal or borderline level. These results may reflect intracellular myocardial potassium depletion brought on by exercise.

FOOD AND NUTRITION NOTES AND REVIEWS

Vol. 17, November & December, 1960

*Food and the elderly. J. A. O'Neill.—p. 81.

*Some aspects of nutrition work in South Africa. R. Stern.—p. 86.

Food and the Elderly. It is apparent that more and more people over sixty-five years of age live alone and care for themselves. Their diet is influenced by living conditions, income, and debility. Nutrient needs of this group are summarized; diets containing foods lower in fat and carbohydrate and more concentrated in protein, vitamins, and minerals are recommended. Consumption of extra fluids is to be encouraged, to combat dryness of the mouth (a common complaint at this age). Organized food services for the elderly are described, including "meals on wheels," which now operates in England, the U.S., and Australia. This service as it functions in Australia is described.

Nutrition Work in South Africa. A decade ago, there were only about six dietitians, graduates of universities in the Union of South Africa. The number is increasing, and appreciation of their work is expanding. Activities of these women in the public health field (through the Department of Agriculture, Technical Services) in education, consultation, and research are described.

FOOD TECHNOLOGY

Vol. 15, April, 1961

*Acceptability of repetitive diets. J. M. Kamen and D. R. Peryam.—p. 173.

*Tenderization of beef by pre-rigor infusion of chelating agent. J. A. Carpenter, R. L. Saffle, and L. D. Kamstra.—p. 197.

*The effect of vacuum packaging on some sliced processed meat products as judged by organoleptic and bacteriologic analysis. F. Alm, I. Erichsen, and N. Molin.—p. 199.

*Objective tests for quality of ground beef. R. E. Rogers and C. S. McCleskey.—p. 210.

Acceptability of Repetitive Diets. During a twenty-four-day period, over-all satisfaction with a self-planned three-day diet was about the same as with a six-day diet preplanned by others. Both diets, in turn, appeared superior to the preplanned three-day diet. However, this difference was not necessarily reflected in differences and changes in acceptability of individual foods. The relative absence of the effect of monotony suggested that the diet was not sufficiently austere to show appreciable differences among the experimental treatments, and indicated that, under some conditions at least, even a three-day menu cycle does not bring about pronounced adverse effects on consumption and preference.

Beef Tenderizing with a Chelating Agent. The effects of prerigor infusion of a chelating agent at various levels on the tenderness of beef were studied. Cutter and canner cow rounds were infused with 10, 15, and 20 per cent solutions of sodium hexametaphosphate, and a 15 per cent solution plus lactic acid. Controls were infused with tap water. Tenderness was improved by prerigor infusions of all chelating solutions, and no one level improved tenderness more than the others. Extractable nitrogen was not a reliable indication of tenderness. Glycolysis was not interrupted by infusion.

Vacuum Packing of Processed Meats. Some sliced processed meat products were shown to retain higher quality in cold storage when vacuum-packed in heat-sealed, Cellophane polyethylene bags than when sealed at atmospheric pressure. Appearance, organoleptic acceptability, and bacterial growth were the criteria for quality. There was a qualitative change in the microflora in vacuum-packed meat samples. Slower growth and changed metabolic activity of microorganisms might explain the higher quality of the vacuum-packed samples.

Objective Tests for Ground Beef Quality. The freshness of ground meats is soon lost during storage at the temperatures common in retail markets. Objective laboratory tests can reveal progressive variance from the fresh product. In ground beef stored ten days at 7°C. (43°F.), the bacterial count, *p*H, and ammonia content progressively increased, and the methylene-blue reduction time decreased. Spoilage was distinctly evident to the senses after five days, at which time bacterial count was 188 million per gram and methylene-blue reduction time was 30 min. Of fifty-nine samples of ground beef from retail markets, 42.4 per cent reduced methylene-blue within 2 hr., 23.7 per cent required 1 hr. or less, and 10.2 per cent required only 30 min. Correlation was good between reduction time, bacterial count, and *p*H.

GASTROENTEROLOGY

Vol. 40, April, 1961

*Nutrition after gastric resection for peptic ulcer. R. W. Postlethwait, W. W. Shingleton, M. L. Dillon, and M. T. Willis.—p. 491.

Diet for Post-Gastric Resection. Complications after gastric resection of peptic ulcer have led to the search for a more satisfactory operation. Late complications usually are recurrent ulcer, mechanical difficulties, stomach obstruction, dumping syndrome, and impaired nutrition. In this experiment, 110 patients were studied for seven years. The inability for a number of these patients to gain weight had been attributed to surgical error, inadequate caloric intake due to dumping syndrome, and impaired absorbtion or digestion. Forty-two per cent of the group were underweight. This study was undertaken to try to find a way for these patients to gain weight. The dumping syndrome problem was helped by the following guides: (a) return to a normal diet as tolerance for the various foods increased; (b) increased fat, decreased carbohydrate, and normal protein intake; (c) limited fluids during and immediately after meals; and (d) multiple feedings for adequate caloric intakes. These changes in diet were sufficient to produce weight gain in most patients on the study.

JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

Vol. 176, April 15, 1961

*Tolbutamide in treatment of multiple sclerosis and Parkinsonism. Letters to the Journal.—p. 166.

*Trichinosis. Letters to the Journal.—p. 167.

Vol. 176, April 22, 1961

*Food preferences of smokers. Foreign Mail—United Kingdom.—p. 241.

Vol. 176, April 29, 1961

*Calcium and phosphorus metabolism. D. Fraser.—p. 281.

*Cobalt-60 vitamin B_{12} absorption test. Foreign Mail—Canada.—p. 385.

Tolbutamide in Multiple Sclerosis. Since tolbutamide has attained widespread use in treating diabetes, there have been several reports of its use in unrelated disorders, including paralysis agitans and, most recently, multiple sclerosis. The possibility that the drug might be of value in these conditions was usually suggested initially by improvement in the condition of patients with a combination of diabetes and one of these diseases. However, it should be noted that therapy in these diseases has been notoriously difficult to evaluate, either because of their variable course, characterized by remissions and exacer-

bations, or because of a pronounced placebo effect. At this time, the use of tolbutamide can be recommended only for treatment of diabetes. Other uses must be regarded as purely investigational.

Trichinosis. This letter is written to refute a previous comment concerning trichinosis in the U.S. The writer states that for ten years or more, only about 450 cases per year have been reported in the U.S. This is no evidence that the disease rate has increased during the past thirty years, and there is reason to believe we actually are not nearly as "wormy" as alarmists have contended. He doubts that there are any specific additional measures worth considering with reference to control of the disease in this country. Generally, it is forbidden to feed raw garbage to hogs — a definite means, when done, of spreading the disease, yet probably not as important as frequently stated. Also, there is a regulation that all pork prepared under government supervision and intended not to be cooked must be held long enough in cold storage to kill larvae of trichina.

Smokers' Food Preferences. The taste perception and food preferences of smokers were compared with those of nonsmokers. Taste thresholds for quinine were significantly higher in the former. There was no significant difference in the taste thresholds for sweet, sour, or salty substances. It appeared that prolonged smoking was necessary to produce decreased sensitivity to bitter taste. Nonsmokers preferred bland foods, whereas a high proportion of smokers preferred salty and spiced foods. The smokers also consumed more fat, although the differences were small. Heavy smokers ate more eggs and fat meat, while the nonsmokers consumed more fat in the form of cookies, candies, and chocolate.

Calcium and Phosphorus Metabolism. Control of vitamin D deficiency in most parts of the world has brought into prominence a number of other clinical aberrations of calcium and phosphorus metabolism, several of which are genetically determined. Although not primarily of nutritional etiology, many of the syndromes simulate classical nutritional disturbances and respond favorably to appropriate adjustments in vitamin D intake. Most inborn errors of calcium and phosphorus metabolism are manifested as forms of hypercalcemia and stimulate hypervitaminosis D; some resemble chronic vitamin A intoxication and some, hypoparathyroidism. Accurate diagnosis of the specific syndrome is important, for modern therapy can produce gratifying improvement in most disturbances of calcium and phosphorus metabolism.

Vitamin B_{12} Absorption Test. A series of cobalt-60 labelled vitamin B_{12} absorption tests was performed. Normal subjects excreted more than 6 per cent of the oral dose in 24 hr., while in patients with pernicious anemia, the excretion was 2.5 per cent or less. The addition of intrinsic factor increased these values to 6 per cent or more. The test probably has its most important use in differentiating patients with true pernicious anemia from those who were incorrectly diagnosed. The test has found an increasing use in differentiating subacute combined degeneration of the spinal cord from other neurologic conditions. Patients with malabsorption states generally had absorption values below 6 per cent, but not consistently. The addition of intrinsic factor did not increase absorption. The results bear out the contention that where renal impairment exists, as evidenced by an elevated blood urea nitrogen level, low B_{12} absorption values are found in 24-hr. urine specimens.

JOURNAL OF CLINICAL INVESTIGATION

Vol. 40, March, 1961

*Effect of estrogens on copper metabolism in Wilson's disease. J. L. German, III, and A. G. Bearn.—p. 445.

*Effects of infusions of serum albumin on serum lipids and lipoproteins in nephrosis. J. H. Baxter, H. C. Goodman, and J. C. Allen.—p. 490.

*Lipoprotein pattern as a function of total triglyceride concentration of serum. M. J. Albrink.—p. 536.

Vol. 40, April, 1961

*The effect of vitamin supplementation on the urinary excretion of tryptophan metabolites by pregnant women. R. R. Brown, M. J. Thornton, and J. M. Price.—p. 617.

*Myocardial oxygen consumption during exercise in fasting and lipemic subjects. T. J. Regan, G. Timmis, M. Gray, K. Binak, and H. K. Hellems.—p. 624.

Estrogens in Wilson's Disease. Ethinyl estradiol was administered to eleven patients with Wilson's disease. In four, serum copper and ceruloplasmin concentrations and the urinary copper excretion increased. In six, serum copper concentration increased, accompanied in three by cupruresis. Serum copper and ceruloplasmin levels and urinary copper excretion did not change in one patient. One patient improved clinically, four were unchanged, and six deteriorated during the estrogen administration. The interrelationships of total serum copper, non-ceruloplasmin serum copper, ceruloplasmin, urinary copper excretion, and clinical change were investigated. Neither ceruloplasmin elevation nor cupruresis necessarily led to improvement. Cupruresis and clinical deterioration could, in general, be correlated with an increase in the non-ceruloplasmin fraction of serum copper.

Albumin Infusions and Serum Lipoproteins in Nephrosis. Ten courses of serum albumin, each usually consisting of 25 to 50 gm. daily for one to four weeks, were administered intravenously to seven patients with nephrosis. Serum albumin concentration and proteinuria increased. Complete loss of edema occurred in most instances. Total serum cholesterol (TC), phospholipids (PL), and ratio of TC:PL, all of which were initially high, fell consistently during the albumin infusions. Serum triglycerides (TG) and lactescence decreased greatly in three of five patients with initially high levels of TG. In the same three patients, there was a selective fall in lipoproteins of density <1.019. No decrease in TG occurred in two patients with near normal levels of TG prior to the infusions. Free fatty acids changed inconsistently. Dextran appeared to induce lipoprotein changes similar to those obtained with albumin. Prednisone caused lipoproteins to change prior to any considerable change in serum albumin. The extent and means by which lipids and lipoproteins in nephrosis are altered by albumin and implications regarding the cause of the lipid abnormality in nephrosis are discussed.

Lipoproteins and Triglyceride Concentration. Clear and lactescent sera from twenty-six normal persons and a variety of patients with disorders of lipid metabolism were analyzed for cholesterol, triglycerides, and cholesterol:phospholipid ratio of whole serum and of various lipoprotein fractions. Liproproteins were ultracentrifugally separated into four fractions of density. Triglyceride concentration of whole serum had a marked effect on liproprotein pattern. All triglyceride fatty acid increments over 6 mEq per liter occurred in the fraction $D<1.006$. As triglycerides increased above this concentration, the relative concentration of cholesterol among the various fractions of $D<1.063$ shifted out of the fraction $D=1.019$–1.063 and into fractions of progressively lower density. On the basis of these data, it was possible to predict the cholesterol concentration of the various lipoproteins from the concentration of triglycerides and cholesterol of whole serum.

Tryptophan Metabolism in Pregnancy. The excretion of the tryptophan metabolites — kynurenine, hynurenic acid, acetylkynurenine, hydroxyhynurenine, xanthurenic acid, σ-aminohippuric acid, and N-methyl-2 pyridone-5-carboxamide — was measured quantitatively in the urine of nonpregnant women, pregnant women without and with vitamin supplementation, and in the same subjects postpartum. The urinary excretion patterns of metabolites suggested a vitamin B_6 deficiency in pregnancy, but the patterns were modified probably by the normal hormonal changes associated with pregnancy. During pregnancy, xanthurenic acid excretion increased; there was no change or a decrease in the excretion of hynurenic acid, even though large amounts of hynurenine and hydroxykynurenine were excreted. The pyridone metabolite of niacin was also excreted in larger amounts by pregnant subjects, suggesting increased niacin synthesis from tryptophan during pregnancy. Pyridone excretion remained high, even after pyridoxine supplementation had significantly lowered the excretion of xanthurenic acid, hydroxykynure-

nine, and hynurenine. Administration of vitamins other than pyridoxine had no detectable effect on excretion of metabolites. Normal non-pregnant women, when tested just before or just after menstruation, or during ovulation, had normal urinary levels of tryptophan metabolites, except for hydroxykynurenine, which was significantly decreased after menstruation.

Lipemia and Exercise. The effects of alimentary lipemia on myocardial performance during exercise was evaluated by comparing the response of nine fasting and eight lipemic subjects. In the former group, a nearly threefold rise of total body oxygen consumption during exercise was attended by a 4.1 ml. per 100 gm. per minute increase in left ventricular oxygen consumption. Similar exercise in the lipemic subjects, 3.5 hr. postprandially, produced a significantly smaller increment of 1.53 ml. per 100 gm. This limited response was largely accounted for by a smaller coronary blood flow rise, presumably due to a change in the physical composition of blood during plasma lactescence. Interference with the process of oxygen diffusion across myocardial capillaries is implied by the fact that, on exercise, the usual enhancement of myocardial oxygen extraction failed to occur in the lipemic group. Despite these findings, the mechanical performance of the heart was normal and lipemia was associated with no evidence of myocardial ischemia, as judged by lactate extractions. The possibility is considered that this lipemic effect on myocardial blood flow and oxygen consumption during exercise may occur at low plasma lactescence levels following a more usual meal.

JOURNAL OF FOOD SCIENCE (formerly Food Research)

Vol. 26, March-April, 1961

*Sensory evaluation of accessory foods with and without carriers. B. J. Kroll and F. J. Pilgrim.—p. 122.

*The carbohydrates in the peel of oranges and grapefruit. S. V. Ting and E. J. Deszyck. —p. 146.

*Destruction of alpha-tocopherol by gamma-irradiation. D. Rose, H. J. Lips, and R. Cyr.—p. 153.

*Proteolytic enzyme activity during storage of radiation-stabilized raw beef and its significance to flavor. M. P. Drake, G. D. Gernon, Jr., and F. J. Kraus.—p. 156.

A comparison of some taste-test methods. N. T. Gridgeman.—p. 171.

Sensory Evaluation of Accessory Foods. Accessory foods, such as jelly or catsup, can be evaluated by consumers for preference without an appropriate carrier, such as bread or hamburger, at least as effectively as with the carrier. Time and money are saved, and accuracy is increased.

Carbohydrates of Citrus Peel. The carbohydrates of citrus peel were divided according to their solubility. The alcohol-soluble solids were composed of about 80 per cent total sugars. Glucose, fructose, and sucrose were the main sugars present. Sucrose content was, in general, lower than the total reducing sugars. The alcohol-insoluble solids were separated into pectic substance, hemicellulose, and cellulose fractions. The pectic substance yielded arabinose, galactose, and galacturonic acid. Hemicellulose contained xylose, arabinose, galactose, glucose, and some uronic acids. In the cellulose fraction, glucose was dominant with some xylose and arabinose. On the average, only between 53 and 70 per cent of the alcohol-insoluble solids were recovered as carbohydrates in the peel of various citrus varieties.

Alpha-Tocopherol and Irradiation. Most vitamins are partially destroyed by irradiation, and it has been suggested that destruction of vitamin E (alpha-tocopherol) was responsible for a lowered reproduction rate in rats fed irradiated foods. In this study, extensive destruction of solutions of DL-alpha-tocopherol was caused by irradiation, which gave rise to products similar to those obtained by auto-oxidation. Irradiation in saturated solvents (mineral oil, methyl myristate) destroyed more tocopherol than did irradiation in unsaturated solvents (methyl oleate, methyl linoleate).

Enzyme Activity during Storage of Beef. These researchers have tried to define the relationship of proteolysis to flavor during storage of irradiated raw beef. The data show that a decrease in consumer-type taste-panel preference during unrefrigerated storage of irradiated (4.5 megarad) raw ground beef correlates to some extent with the action of endocellular tissue proteolytic enzymes. Refrigeration effectively controlled proteolytic activity. There was limited control of proteolysis during unrefrigerated storage when using high-*p*H beef.

JOURNAL OF HOME ECONOMICS

Vol. 53, April, 1961

*How can I judge my success in my job? C. King.—p. 263.

*Finished foods—a first report.—p. 281.

*The effect of electronic cookery upon the appearance and palatabilty of a yellow cake. M. B. Street and H. K. Surratt.—p. 285.

*Small electrical appliances for food preparation. D. W. Frey.—p. 292.

Job Success. The question, "How can I judge my success in my job?" is analyzed in terms of the home economist. It is pointed out that occupational choice should satisfy basic needs. The many factors influencing success (and the various interpretations of success) are discussed. Criteria for judging success (the result of a survey of selected home economists) are listed. Personal satisfaction was found to be the most desired attribute. Linked with this was the feeling of helping someone else or observing another person's growth. The group was relatively unconcerned with tenure status, job offers, recruitment, and organizational ability. Reasons for the relative importance of the seventeen criteria are considered.

Finished Foods. Goals and operation of the Finished Foods Committee of the Home Economists in Business are set forth. The project evaluates cooked foods prepared by oven cooking and top-of-the-range cooking. The first report on cake-mix cakes, shortening type (except for chiffon cakes), is presented. Detailed information is given on the following: (a) best results for finished cakes, (b) factors which produce best results, (c) poor results (with reasons), and (d) common consumer questions.

Electronic Cookery and Cake Quality. A yellow cake mix that required the addition of whole eggs and water was judged for appearance and palatability after baking in an electronic range. An increase in liquid (20 to 40 gm. per layer) produced a cake similar in cell distribution, moisture content, and volume to a cake baked conventionally. Quality of cake crumb was the same with loaf, layer, or eight cupcakes in an identical cooking time. Browning may be accomplished without sacrificing cake quality. A more tender and less moist product is produced than if the cake were baked conventionally.

Small Electrical Cooking Appliances. A survey of 100 Philadelphia homemakers was made to determine the usefulness of small electrical appliances. Highly useful were found to be: the toaster, the standard mixer, and the portable mixer. Moderately useful were: the coffee-maker, fry-pan, blender, and broiler-rotisserie. Low in usefulness were the waffle iron, waffle iron-sandwich grill, deep-fat fryer, roaster, and griddle. Implications of these observations are discussed.

THE JOURNAL OF NUTRITION

Vol. 73, April, 1961

*Statistical study of the relationship between dietary linoleate and the fatty acids of heart and blood lipids. W. O. Caster and R. T. Holman.—p. 337.

*Metabolic patterns in preadolescent children. IV. Fat intake and excretion. L. B. Stier, D. D. Taylor, J. K. Pace, and J. N. Eisen. —p. 347.

*Comparative vitamin B_6 activity of frozen, irradiated, and heat-processed foods. L. R. Richardson, S. Wilkes, and S. J. Ritchey. —p. 363.

*Comparative vitamin K activity of frozen, irradiated and heat-processed foods. L. R. Richardson, S. Wilkes, and S. J. Ritchey. —p. 369.

*The regulation of depot fat by linoleic acid. H. Kaunitz, C. A. Slanetz, R. E. Johnson, and V. K. Babayan.—p. 386.

Fatty Acids of Heart and Blood. A number of statistical techniques were applied to the study of data on tissue analysis, dermal score, and weight gain of rats maintained with controlled intakes of linoleic acid and total fat. The correlation between each of these variables and dietary linoleate as well as other variables is presented. The correlation matrix thus generated was used for multiple regression and factor analysis studies.

Fat Intake and Excretion. The amount of fat in the diets and feces was determined for thirty-five girls, seven to nine years of age. For the three groups studied in three different years, the average daily intake of fat was 66, 69, and 79 gm., and correspondingly, the average fecal fat was 3.6, 2.6, and 3.2 gm. The apparent digestibility of the fat ranged from 94 to 96 per cent. Fecal fat increased 0.05 gm. as the fat intake increased 1 gm., when data were expressed on a per-kilogram-body-weight basis.

Vitamin B_6 is Preserved Foods. The vitamin B_6 content of six foods which had been frozen, canned by conventional heat treatment, and irradiated with 2.79 and 5.58 megarads of gamma rays was obtained using the growth of rats as the assay procedure. The vitamin B_6 activity in every treatment of beef liver, boned chicken, cabbage, and green beans was less after the food had been stored fifteen months than initially. Every treatment of Lima beans and sweet potatoes resulted in the same or a higher activity after storage for the same period. The vitamin B_6 activity of the heat-treated and irradiated foods was approximately 40 to 60 per cent of that of the frozen foods at each corresponding storage period.

Vitamin K in Preserved Foods. Vitamin K content of six foods which had been frozen, canned by conventional heat treatment, and irradiated with 2.79 and 5.58 megarads of gamma rays was obtained using the chick assay procedure. Foods assayed were: asparagus, broccoli, cabbage, cauliflower, green beans, and spinach. The values for vitamin K activity were higher in some instances and lower in a few cases in the treated foods than in the frozen foods. Similar variations in values were obtained after storage. These differences were attributed chiefly to variations in values obtained for different levels of a food, and it is concluded that there was no appreciable difference in vitamin K activity caused by the method of preservation or by storage.

Regulation of Depot Fat by Linoleic Acid. The composition of the neutral fat of rats fed two types of triglycerides (medium chain and long chain) in conjunction with various levels of linoleic acid was studied. It was concluded that linoleate regulates the type of fat deposited. It leads to a decrease in neutral fat in relation to body weight and facilitates the laying down of a depot fat more representative of that in the diet.

JOURNAL OF PEDIATRICS

Vol. 58, March, 1961

*Kwashiorkor in Cape Town: the background of patients and their progress after discharge. A. Moodie.—p. 394.

Kwashiorkor in Cape Town. The background of 150 hospitalized patients with severe kwashiorkor has been studied with the use of the patients' siblings as controls. At the same time, growth rates have been recorded of various children who lived in the same social setting but who had not developed kwashiorkor. The disease tends to occur among child populations that show wide spread evidence of growth retardation. Other pertinent findings are early failure of lactation and dietary deficiency associated with poverty, ignorance, prevalence of infection, and a general state of poor housing and social disorganization among unskilled laborers in an area of rapid industrial development. Preliminary results are given for the progress of 132 cases visited at least once within eighteen months after discharge from the wards. Of these, 67 per cent had gained weight continuously; 25 per cent had become stationary in weight, had lost weight, or had relapsed; and 8 per cent had died. Most of the failures occurred during the first nine months after discharge. The follow-up study will extend for five years.

THE LANCET

No. 7172, February 11, 1961

*Diet rich in unsaturated fat. J. Lloyd and H. Jukes.—p. 312.

No. 7173, February 18, 1961

*Alimentary lipaemia and ischaemic heart-disease. I. A. Bouchier and R. Bronte-Stewart.—p. 363.

No. 7180, April 8, 1961

*Effects of ethyl arachidonate, cod-liver oil, and corn oil on the plasma-cholesterol level. K. J. Kingsbury, D. M. Morgan, C. Aylott, and R. Emmerson.—p. 739.

Diet Rich in Unsaturated Fat. An unsaturated-fat diet suitable for use at home is described. Most of the daily fat is taken as corn oil, which is incorporated in special foods, i.e., "milk," margarine, cheese-spread, and cooking oil. Except for the "milk," which costs about twice as much as ordinary grades of cow's milk, the diet is inexpensive. The foods keep as long as normal dairy products. The "milk" is supplied in tins and, once opened, should be used within 24 hr. unless refrigerated. The main difficulty in the domestic use of the corn-oil diet arises from the growing popularity of ready-made and packaged foods. Cakes, biscuits, sauces, tinned puddings, and meats usually contain much saturated fat and are therefore unsuitable. The only way to overcome this will be to increase the range of the corn-oil foods. A start has been made with rice pudding, and a palatable ice cream has been manufactured, though it is not yet commercially available.

Alimentary Lipemia aand Ischemic Heart Disease. An oral butter-fat tolerance test was performed on 146 males: 29 with ischemic heart-disease and 117 controls. The controls consisted of members of the three racial groups resident in Cape Town. The alimentary lipemia was greater and continued longer in patients with ischemic heart disease than in the controls. The following was the typical pattern of tolerance curve found among the patients: greater fasting lactescence of the plasma and long continued post-prandial lipemia in the patients with ischemic heart disease. No racial or age differences in the fat-tolerance test were demonstrated. The combined study of oral and intravenous fat-tolerance tests was undertaken on fourteen volunteers: seven patients with ischemic heart disease and seven controls. When the fat was fed orally, the characteristic differences between patients and controls was observed. When the fat was administered intravenously, no differences in the amount of circulating fat or the rate of removal of the fat from the circulation were detected in either group.

Oils and Plasma Cholesterol. In an investigation of the effect of certain fatty acids or oils on plasma cholesterol, young healthy adults, ages nineteen to twenty-five, were given diets supplemented with: (a) ethyl arachidonate, (b) cod-liver oil, or (c) corn oil. In one series, either ethyl arachidonate or a high-iodine-value fraction prepared from cod-liver oil was substituted for the same amount of animal fat in a controlled basic diet. Either supplement reduced plasma cholesterol by 20 to 25 per cent. Twenty-five to 30 gm. cod-liver oil added to an uncontrolled diet produced a similar effect, but more slowly. The minimal effective dose seemed to be about 20 gm. per day. Corn oil, 25 gm. per day, affected cholesterol less than the same amount of cod-liver oil. These results suggest: (a) that the higher the iodine value of an oil or fat, the lower the effective minimum dose; and (b) that the action on the plasma cholesterol depends on the presence in the fatty acid of several unsaturated bonds which are neither trans nor conjugated.

METABOLISM

Vol. 10, March, 1961

*Influence of nicotinic acid on starvation hypercholesteremia in rabbits. R. Altchul and T. A. Smart.—p. 231.

Niacin and Starvation Hypercholesteremia. A study was carried on to test the hypothesis that niacin decreases serum cholesterol because it causes anorexia. The effect of decreased food intake on serum cholesterol was re-investigated. The food of rabbits was withdrawn completely, or reduced to one-third the previous caloric intake for 48 hr. Highly significant increases in serum cholesterol resulted. When 0.15 gm. niacin, given orally twice daily, was added to the restricted diets, serum cholesterol decreased to almost the same degree as when niacin was given to animals with non-restricted diets. The conclusions are: (a) niacin's effect on lowering serum cholesterol cannot be attributed to decreased food intake; and (b) niacin influences decreased serum cholesterol if given during fasting, whereas fasting alone increases serum cholesterol.

MILITARY MEDICINE

Vol. 126, April, 1961

Interdepartmental Committee on Nutrition for National Defense. F. B. Berry.—p. 249.

NEW ENGLAND JOURNAL OF MEDICINE

Vol. 264, April 13, 1961

*Postprandial lipemia in health and in ischemic heart disease: A comparison of three indexes of fat absorption and removal and their modification by systemic heparin administration. D. F. Brown, A. S. Heslin, and J. T. Doyle.—p. 733.

Lipemia in Health and Ischemic Heart Disease. The ability of healthy persons and patients with ischemic heart disease to remove ingested fat was studied by means of a radioactive labeled fat load. Changes in levels of total esterified fatty acids, serum translucency, and radioactive lipid were measured simultaneously at selected intervals for 24 hr. after ingestion. The group with ischemic heart disease exhibited more marked and more prolonged lipemia than normal subjects. Differences were most marked at 9 hr. after fat ingestion. The 9-hr. values for plasma optical density, total esterified fatty acids, and lipid I^{131} did not completely separate healthy from diseased persons. Absolute changes in total esterified fatty acids at 9 hr. and in lipid bound I^{131} 9 hr. after the fat load exhibited the least overlap between the two groups. Clinically healthy middle-aged men cleared fat more rapidly than patients with ischemic heart disease but more slowly than healthy young men. It is concluded that patients with ischemic heart disease clear ingested fat from blood more slowly than healthy persons.

NEW YORK STATE JOURNAL OF MEDICINE

Vol. 61, March 1, 1961

*The glucagon problem. S. S. Bergen, Jr., and T. B. Van Itallie.—p. 779.

Vol. 61, March 15, 1961

*Diabetic acidosis. K. L. Pines.—p. 925.

*Eating problems in adolescence. C. M. Young.—p. 959.

The Glucagon Problem. Glucagon is probably secreted by the alpha cells of the pancreas. Stimulation of hepatic glycogenolysis is its best defined action, although many extrahepatic effects have been reported in the last ten years. Relationship of glucagon secretion to the pituitary gland, the existence of a clinically manifest glucagon deficiency state, and its etiologic role in diabetes mellitus are problems that require more study. Clinically, glucagon has been used as a diagnostic test of liver function and in treating various hypoglycemic states. It has been used to terminate insulin coma in psychiatric patients and as therapy in diabetic patients who have received too much insulin.

Eating Problems in Adolescence. Ten suggestions are given for parents and other adults who wish to help educate the teen-ager concerning proper nutrition. (1) Give the teen-ager credit for knowing something. (2) Give him a chance to talk and ask questions. (3) Allow him to accept or reject an idea while talking about it; then he won't have to reject it by action. (4) Don't fall into the trap of "taking sides" in an argument between generations that probably is not really based on food. (5) Don't force-feed food or ideas to teen-agers. Force will make them resist or become more childish and less able to be responsible adults. (6) Don't be afraid to express your honest feelings about what is important. Adolescents don't really want to be "strictly on their own" yet. (7) The best teaching is by example, not by talking. (8) Good nutrition is a long-term thing, not a meal-by-meal or even a day-by-day emergency. (9) There is no perfect food (even milk has detractors who worry about too much calcium or too much cholesterol). There is some food value in the snacks we worry about (milk shakes and hamburgers do contain proteins as well as carbohydrates and fats). (10) Aim for acceptance of one's self instead of going along with an adolescent's dream wish.

NUTRITION

Vol. 15, Spring, 1961

*Dietetics in Sweden. M. Neumüller.—p. 7.

*Dietetic aspects of disorders of calcium and fat metabolism. W. H. Taylor.—p. 11.

*The composition of foods. E. M. Widdowson.—p. 14.

*Diet and chronic chest disease. R. B. Pridie and R. Harrison.—p. 20.

Dietetics in Sweden. In Sweden, as in most countries, dietetics is a rather new profession, even though as such, it has been practiced in that country since the beginning of the century. Dietitians graduated for the first time in about 1917 to 1920. In this paper, the chairman of the national organization of dietitians in Sweden describes the training and job opportunities for Swedish dietitians. The combined training period takes at least five years and for most, it extends to almost six years.

Disorders of Calcium and Fat Metabolism. Increasing understanding of disorders of calcium and fat metabolism brings changes in diagnostic and therapeutic procedures which, in turn, affect the part played by the hospital dietitian in the management of these diseases. Diets of known composition to be used in balance studies will be required less and less as fat and calcium balance studies are replaced by less cumbersome and more accurate methods. It is important to realize that not only are fats and fat-soluble vitamins poorly absorbed in idiopathic steatorrhea and celiac disease, but also water-soluble substances as calcium, glucose, iron, B_{12}, and even water itself. From the dietetic viewpoint, low-fat and/or gluten-free diets should be designed to contain ample calcium and iron. Patients with idiopathic hypercalciuria appear to suffer from an excessive absorption of calcium. Results observed by this investigator illustrate the short-term use of sodium phytate instead of low-calcium diets. Lastly, mention is made of the disastrous effects which may follow long-term administration of high-calcium diets, particularly in patients who are also taking absorbable alkaline medicine, such as sodium bicarbonate.

Composition of Foods. In this paper, Elsie Widdowson relates the evolution of the British report, *The Composition of Foods*, the third edition of which was recently published. The story goes back to 1925, when Dr. R. A. McCance was trying to design diabetic diets from food tables then in existence. How and why the values in the tables in *The Composition of Foods* were used are discussed. The new edition has figures for vitamins, amino acids, and about a hundred new foods, many of which are proprietary preparations.

Diet in Chronic Chest Disease. The management of the diet in patients with chest disease is a question of keeping them at their optimal weight. Diseases discussed include tuberculosis, bronchitis, bronchiectasis, lung cancer, bronchial asthma, and cardiac disease. In the patient with congestive cardiac failure, sodium restriction is also needed.

NUTRITION REVIEWS

Vol. 19, April, 1961

*Activities of the Food and Nutrition Board, 1960. L. Voris.—p. 97.

Food and Nutrition Board, 1960. The National Academy of Sciences-National Research Council has performed its duty to the public welfare in the field of nutrition through a series of committees on animal nutrition in continuous operation since 1920 and, since 1940, through the Food and Nutrition Board for human nutrition. This paper, describing activities during 1960, indicates the scope and nature of the work of the Food and Nutrition Board. Domestic problems, committee activities, and international activities are outlined.

PROCEEDINGS OF THE NUTRITION SOCIETY

Vol. 20, No. 1, 1961

*The changing patterns in British food habits since the 1939-45 war. D. F. Hollingsworth.—p. 25.

*Diet of London busmen—a sample study. E. M. Bramwell.—p. 30.

*Food habits in pregnancy. N. Taggart.—p. 35.

*Flavour and flavour acceptance. M. Andross.—p. 40.

The effect of industrialization, recent food legislation and advertising on food habits in Britain. M. Pyke.—p. 46.

*Basic physiological factors affecting calorie balance. J. V. G. A. Durnin.—p. 52.

*The central nervous regulation of calorie balance. G. C. Kennedy.—p. 58.

*The effects of the endocrine system on calorie balance in man. R. Greene.—p. 64.

*Adipose tissue metabolism and calorie balance. T. M. Chalmers.—p. 68.

*Energy expenditure and calorie intake in young men. O. G. Edholm.—p. 71.

*Calorie requirements in human pregnancy. A. M. Thomson and F. E. Hytten.—p. 76.
*Energy balance in early life. E. M. Widdowson.—p. 83.

Changing Patterns in British Food Habits. Changes in the pattern of British food habits since World War II are considered. For all nutrients evaluated, the national diet was of greater nutritional value in 1958 than before the war. The most marked changes, compared with prewar estimates, were for calcium and thiamine. The general pattern of change can be seen from changes in the proportions of dietary calories derived from protein, fat, and carbohydrate. In recent years, there has been a tendency for the proportions from carbohydrate and, to a lesser extent, protein to fall. This has been due mainly because of decreasing consumption of flour and its products while use of fat has risen. Another striking change is the increased consumption of "convenience" foods. Eating out is increasing, particularly among young people. There is also an increasing number of vending machines.

Diet of London Busmen. As part of a research project on coronary heart disease of middle-aged men in different occupations, the diet of London busmen is being studed. Drivers of London's double-decker buses have more coronary heart disease than the most physically active conductors; they are also taller, heavier, and fatter. A sample dietary study, based on a week's weighed meals, is in progress to see whether the diets of the two groups are different. At present, no significant differences have been found in their nutrient intake, and the food patterns are similar.

Food Habits in Pregnancy. Any changes, quantitative or qualitative, which occur as a result of pregnancy will be superimposed on pre-existing food habits. Background variations in food habits have been studied, and it has been shown that women in the poorest classes ate much less fruit, green vegetables, raw or salad vegetables, and milk; less meat, fish, brown bread, and root vegetables, including potatoes; but more white bread than women in the professional classes. Preliminary results of an inquiry being made into food habits during pregnancy reveal that in more than half the women, appetite, definitely increased, and increased thirst was even more common. Nausea and vomiting affected about half of the women in varying degree. About two-thirds of these women developed some craving during pregnancy, the most common being for fruit. Fairly frequent were cravings for strongly flavored or savory foods. Aversions to certain foods occurred as often as cravings, tea and fried foods being common.

Flavor and Flavor Acceptance. The first section in this paper pertains to the physiology of flavor. How flavor involves the senses—touch, taste, and smell—is discussed. Next, chemicals in food which affect flavor are presented, i.e., sugars, salt, acids, alcohols, and phenols. Also, much of the flavor in foods is in their aroma which is due to essential oils, Many flavors are destroyed by heating, but some are developed only by heat. Finally, methods used by tasting panels are discussed. Scoring and ranking are used more than any other sensory tests.

Physiologic Factors and Caloric Balance. The high incidence of obesity suggests that control of caloric balance in man is relatively insensitive to precise regulation. The value of using the basal metabolic rate is questionable in determining daily energy expenditure. "Relative metabolic rate," or the measure of the total energy expended in work as related to the basal metabolism of the subject, may be meaningful. The factor of exercise, or lack of it, is a difficult problem in relation to caloric balance. Other factors having an influence on caloric balance include age, climate, appetite, weight balance of the body, and losses in urine and feces.

Central Nervous Regulation of Caloric Balance. This author considers briefly how the brain might regulate energy balance. The so-called "central" theories of appetite—the thermostatic theory of Brobeck and the glucostatic theory of Mayer—can explain energy losses. However, the body keeps its own energy balance sheet automatically, i.e., biochemically, and there is only one form in which any significant amount of surplus energy can be stored—as fat. If fat stores are kept constant, energy balance must be preserved. The author believes that in the long term, the hypothalamus modifies the general level of food intake and bodily activity in response to changes in body fat.

Endocrine System and Caloric Balance. There is no good evidence that deficiency of any endocrine gland is an important cause of obesity. That deficient or excessive action may occasionally be a contributory factor is a possibility discussed in this paper in which the posterior and anterior pituitary, the thyroid, the adrenals, the gonads, and the pancreas are considered. It is pointed out that the estimation of the basal metabolic rate is not strictly a measure of thyroid activity, and it is important not to confuse hypometabolism and hypothyroidism. The influence of the thyroid on caloric needs is due for reconsideration.

Adipose Tissue Metabolism and Caloric Balance. Adipose tissue can no longer be regarded simply as an inert storage site in which fat formed in the liver or derived directly from the diet is deposited and from which, during fasting, fat is mobilized and burned in the liver for energy. The use of substrates labelled wth radioactive isotopes has established that these fat stores are constantly being turned over, and that most of the fat is synthesized from glucose within the tissue itself. The synthesis and the release of fatty acids by adipose tissue are outlined. Nervous and humoral factors which appear to regulate the metabolism of adipose tissues are reviewed.

Energy Expenditures and Caloric Intake. The energy expenditure and caloric intake of young men engaged in relatively strenuous work in different climates have been studied. No relation was found between daily food intake and energy expenditure. Body weight can show marked fluctuations from day to day, probably due to a water imbalance. However, over a period of a week or more, the food intake and energy expenditure are closely balanced and weight remains relatively constant. It is suggested that the factors controlling appetite are not related to immediate demands but are affected by a longer-lasting stimulus. In extreme conditions with severe restrictions on intake, energy expenditure is certainly reduced. Nevertheless, the evidence suggests that under more usual conditions, appetite is controlled rather than activity.

Caloric Requirements in Pregnancy. Several professional, national, and international organizations have made statements on the requirement or recommended allowance of calories in human pregnancy. Yet, a reasoned account of the matter has never been published. This paper, from the Obstetric Medicine Research Unit of the University of Aberdeen, is a preliminary attempt to fill the gap. Rather than fit their data to an arbitrary standard, these investigators used a statistical model calculated from hospital records. During pregnancy, the patient is allowed to "eat to appetite" and gains 12.5 kg. Of the total gain, about half is accounted for by the growth of the uterus and its contents and of the mammary glands. The other half represents increase in the maternal body fluids and non-reproductive tissue. Storage of nutrients is calculated to be about 45,000 calories and maintenance costs about 35,000 calories. The total cumulative costs of pregnancy are about 80,000 calories, taking no account of altered activity. These investigators feel that the physiologic energy requirement is not greatly reduced because of altered activity, and that the practical allowance of FAO (similar to that of the Food and Nutrition Board) of 40,000 calories is unreasonable. They doubt that sufficient reduction in activity usually occurs to eliminate, or even to halve, the physiologic caloric requirement.

Energy Balance in Early Life. Human beings start life in negative energy balance. The baby catabolizes some of its own body tissue to provide the energy it requires, and consequently loses weight. How much solid matter is lost per day depends on the metabolic rate and on the proportions of protein, fat, and carbohydrate that are being oxidized. The newborn baby has the ability to raise its heat production and metabolic rate when

the environmental temperature is low. It has been shown that only a small proportion of a baby's total caloric intake is used for growth, even in early postnatal life when the growth rate is probably higher than it ever is again. About 90 per cent of the energy value of the food is used to maintain the living structure of the body and a normal temperature. There is undoubtedly a wide variation from one baby to another in energy requirements.

PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE

Vol. 106, March, 1961

*Fiber and pectin in the diet and serum cholesterol concentration in man. A. Keys, F. Grande, and J. T. Anderson.—p. 555.

Fiber and Pectin and Cholesterol Levels. It has been noted that Italian-type diets tend to be high in complex carbohydrates, such as pectin, hemicelluloses, and fiber, and that lower serum cholesterol levels have been consistently found with the diets. Rigidly controlled experiments on physically healthy, middle-aged, male mental patients tested the effect of fiber or cellulose with each of two different diets and the effect of pectin with somewhat different diets. The diets, consisting of natural foods with and without supplements of 15 gm. daily of either cellulose or pectin, failed to show any significant effect on serum cholesterol from the cellulose but they did consistently show an effect from the pectin. The pectin effect was apparent in three weeks and amounted to an average fall of about 5 per cent below the level on the same diet without the pectin supplement. It is suggested that the amounts of cellulose and pectin used correspond to the upper levels of these substances provided in natural human diets.

PUBLIC HEALTH REPORTS

Vol. 76, April, 1961

*Eating patterns among migrant families. G. Delgado, C. L. Brumback, and M. B. Deaver.—p. 349.

Eating Habits of Migrant Families. A study of the dietary patterns of a group of Negro migrant families living in a labor camp in Florida revealed a lack of some of the protective foods. It also pointed up the need for better use of the foods available and for wiser selection of foods in purchasing. The most common dietary deficiencies were low intakes of milk, green and yellow vegetables, citrus and other fruits, eggs, and white and sweet potatoes. Legumes and meats were eaten in fair quantities. Sweets, fats, and flour consumption was above the recommended amounts.

SURGERY, GYNECOLOGY, AND OBSTETRICS

Vol. 112, April, 1961

*Blood pressure and osmolarity changes in the dumping syndrome. R. C. Read and D. Swensen.—p. 488.

Blood Pressure and the Dumping Syndrome. Blood pressure following oral administration of isotonic and hypertonic solutions was measured before and after surgery for duodenal ulcer. Measurements were also taken for the dumping syndrome. After gastrectomy, a 50 per cent glucose solution induced a significant increase in pulse pressure. The response in patients with dumping syndrome was similar to, but greater than that of other post-gastrectomy patients. These findings suggest that the dumping syndrome represents a manifestation of the body's response to hyperosmolarity.

AMERICAN RESTAURANT

Vol. 45, April 15, 1961

*Dairy products.—p. 23.

*Storage methods. T. Greer.—P. 35.

*Training specialist cooks. G. L. Wenzel.—p. 42.

Vol. 45, May 1, 1961

*Good coffee is good business!—p. 33.

Dairy Products. An eight-page section perks up interest in the many possibilities for serving milk, buttermilk, cheeses, cottage cheese, sour cream, butter, ice cream, and sherbet. New quantity recipes are included for cherry topping for ice cream, shrimp-cottage cheese salad, molded cottage cheese, cheese-bacon sandwich with sour cream, strawberry ice cream puffs, several fruit salads with cottage cheese and sour cream, desserts, sour cream dressing, Oriental chicken, and various kinds of milk shakes. Whipped butter for pancakes is a selling feature; other merchandising hints for milk sales are given.

Refrigerated Storage. Optimal refrigeration temperatures are as follows: 44° to 50°F. for fresh fruit, vegetables, and eggs; 38° to 46°F. for dairy products; 34° to 38°F. for fresh meat and poultry; 32° to 36°F. for seafood; 33° to 36°F. for leftovers; and 0° to −20°F. for frozen food. Storage containers and methods of handling foods in all of these categories are described. Included also are hints on the refrigerating and freezing of bakery goods.

Training Specialist Cooks. A simple training program for beginning cooks is based on the availability of a good recipe, a fool-proof production system, and the right piece of equipment. Eight 15-min. demonstrations comprise the course. Recommended equipment and food products (as used in the course) are described and mentioned by brand name.

Good Coffee. This special section of eight pages lists rules for making freshly brewed, full bodied, full flavored coffee. Cleaning procedures are stressed. Exotic coffee recipes, as found in the popular coffee houses, are included, as are tips for making iced coffee.

FOOD SERVICE MAGAZINE

Vol. 23, April, 1961

*1961 food processing advances. L. H. Kotschevar.—p. 36.

*The exciting new world of convenience foods. L. H. Kotschevar.—p. 38.

Canned convenience: Menu magic. H. Sanstadt.—p. 46.

*Caution is the watchword! L. H. Kotschevar.—p. 54.

Food Processing Advances. Freeze-drying may make it possible to hold perishable foods, such as meats, poultry, seafood, fruits, and vegetables, on just common shelf storage at room temperatures. If so, there will be drastic changes in freezer and refrigeration requirements, in layouts, and in operating policies. The new process, sometimes called "wagerizing," costs 4 to 10 cents per pound, but is offset by savings in shipping and storage. Marketing plans of some of the large food processing firms are presented. Instant freezing, using liquid nitrous oxide at −128°F. or liquid nitrogen at −320°F., and removing oxygen in liquids (a method called "sparging") results in products of remarkable freshness in color and texture. The problem of off-flavor or stale flavor is reduced, particularly in precooked frozen dinners, juices, wines, purées, sauces, and gravies. Dehydro-freezing removes part of the moisture from fruits, vegetables, and other products, and they must be held in the frozen state. Bulk and weight are reduced about 50 per cent. Peas and potatoes are being processed successfully by this method.

Convenience Foods. The trend is toward the elimination of preparation labor through the use of foods which require only slight conditioning on the premises. Use of convenience foods results in lower labor costs, less need for skilled labor, standardization of quality and cost, and portion control. Many operators fear a loss of individuality in their foods — the challenge of differentiation will be in merchandising. Factors which will slow down the transition to convenience foods are cited and the responsibility of management in meeting the challenge of these products is emphasized.

Selling Convenience Foods. This case history of a new operation indicates that more than convenience foods is needed to offset inexperience. Though the food was above average, it was not served as attractively as possible, many items were too "fancy" for the clientele, and family trade was not attracted to the place. Merchandising and proper service must accompany the use of preprocessed foods if their potential is to be realized.

FOOD ENGINEERING

Vol. 33, April, 1961

*Micro-packages feasible in tests. G. Lehman.—p. 37.

*Mice are underrated in food plants. Part II. Baiting and trapping. T. L. Hugé.—p. 86.

Micro-Packages. Capsules as small as 0.025 in. can give much of the protection of tinplate and film packages. Micro-encapsulation may be used in the field of prepared mixes,

for beverages, cakes, and other foods. Highly volatile substances to give flavor and aroma can be protected until needed; the coating can be engineered to dissolve when water is added, or tailored to break down under heat, pressure, grinding, or enzymatic action. Other uses of the process are suggested.

Mice in Food Plants. A safe and effective rodent trapping and poisoning program is proposed. Attention is given to bait boxes, poisons, or rodenticides (both liquid and dry). Brand names of anti-coagulant poisons are included, as well as tricks of trapping.

FROSTED FOOD FIELD

Vol. 32, March, 1961

*The FTC's economic study of frozen food industry. C. M. Skonberg.—p. 22.

*Dehydrofreezing and freeze-drying.—p. 26.

Vol. 32, April, 1961

*Nutritive content: a selling tool for seafoods.—p. 29.

*Microbiology of frozen seafoods.—p. 31.

*Frozen foods in food service establishments.—p. 39.

*Factors concerning microbial standards for frozen foods. P. J. Brandly.—p. 45.

Economic Study of Frozen Food Industry. The duties of the Federal Trade Commission are related, and results of a survey of the frozen food industry are discussed. Twenty-three per cent of the total sales of frozen fruit, juices, and vegetables were direct to the ten largest food distributors. The largest part of all frozen foods, 65 per cent, went to the frozen food distributors, independent retailers, all other food chains, and all other customers of the freezers. Analysis of these and other statistics indicate that the frozen food industry is largely dominated by packer brands. It is essentially composed of small companies, but the bulk of the sales volume is generated by the largest companies. There is a high degree of specialization in the industry, and many packers pack their specialty items for other packers under co-pack arrangements. The type of data to be collected in the future, to make this study more complete and meaningful is also indicated.

Dehydrofreezing and Freeze-Drying. These two processes are described. Several firms are now dehydrofreezing in commercial lots. The technique is being used successfully on peas and diced carrots, apple slices, diced potatoes, and pimientoes. Production rates are indicated. The freeze-drying process is being applied to fruits, vegetables, meats, shrimp, and exotic products from tropical countries. Advantages of this type of food to the Army of the future are explained.

Nutritive Value of Frozen Seafoods. The attractive nutrition picture painted by frozen seafood is seen in the discussion of this product's contribution in terms of protein, vitamin A, thiamine, riboflavin, niacin, iron, calcium, magnesium, phosphorus, copper, and iodine; also, sodium, and fat.

Microbiology. High bacterial counts in frozen seafoods are indicators of possible adverse changes in product quality. Sources of contamination are the environment in which the catch is placed and the processing plant. Various ways are suggested by which this contamination can be prevented. The hazard of pathogens, particularly in prepared frozen fish and seafoods, is a matter of concern. As yet, there are no official, industry-wide standards for bacterial counts of frozen fish or seafood; however, it has been suggested that 100,000 total bacterial count per gram be the upper limit.

Frozen Food Management. Basic information on the use and handling of frozen foods by the volume feeding operator is the subject of this article. Advantages and disadvantages of frozen foods are listed. Control at each of these points is imperative: ordering (including quality, quantity, grades, brands, and sizes), receiving (involving handling, delivery times, and checking), and storing. Ways of increasing freezer efficiency are suggested. Issuing procedures, thawing techniques, and portion control all receive attention. Facts about holding and refreezing frozen foods are given, as are data on storage temperatures for fruits, juices, vegetables, poultry, fish, baked goods, and prepared foods. In general, each rise of 10 degrees in temperature cuts storage life in half.

Microbial Standards. A food which has low bacterial counts as a result of pasteurization or the addition of bacteriostatic preservatives is misleading to the consumer if it is evaluated by its bacterial load. This permits sloppy sanitary practice; poor, slow, inefficient sales and distribution procedures; and sloppy handling at the retail level. On the other hand, low bacterial counts obtained by careful sanitary practice of clean and wholesome articles handled at temperatures which negate or stop bacterial growth and which are distributed rapidly and arrive in fresh unaltered condition are commendable. Perhaps present microbial standards are unrealistic.

HOSPITAL MANAGEMENT

Vol. 91, May, 1961

*Putting "umph" in entrées. I. Lucas.—p. 44.

"Umph" in Entrées. Garnishes, delicate sauces, herbs and other seasonings, glazes for roasts, wines, and fruits are just a few of the accents that can make entreés interesting. In addition to general suggestions, quantity recipes are given for turkey supreme, peach topped meat loaf, pancakes Palermo, and olive tartar sauce.

HOSPITALS

Vol. 35, April 1, 1961

*Fact and fiction in nutrition. Part 1. O. L. Kline.—p. 55.

Vol. 35, April 16, 1961

*Fact and fiction in nutrition. Part 2. O. L. Kline.—p. 172.

Nutrition Fact and Fiction. The director of the Division of Nutrition, Food and Drug Administration, describes the role of this division in protecting the public. Nutritional quackery had led to promotion of four myths: (a) that all diseases are caused by faulty diet, which causes a chemical imbalance in the body; (b) that soil depletion causes malnutrition; (c) that many of our foods are overprocessed; and (d) that everyone with that "tired feeling" or any ache or pain is malnourished, the victim of sub-clinical deficiencies. The use of vitamin-mineral supplements is discussed.

Misuse of Scientific Information. The news value of nutrition research has led to misleading claims for food products. The Division of Nutrition of the Food and Drug Administration has become alarmed over the exaggerated claims being made for foods offered for their protein value because of small additions of protein or amino acids. Protein characteristics are reviewed. Fat metabolism and the possibility of a relationship (not confirmed) between hypercholesteremia and heart disease have made the public interested in products offered for the lowering of blood cholesterol and the treatment of heart disease. Action taken by the Food and Drug Administration in this connection is cited, including the seizure of shipments of products offered for the treatment of heart disease and containing minute amounts of linoleic acid or lecithin. Another problem, the farming out by hospitals of the preparation of infant formulas to so-called infant formula services, is brought out. Nutritional adequacy and sterilization techniques have come in for questioning.

INPLANT FOOD MANAGEMENT

Vol. 8, April, 1961

*How to build spring salad sales. M. W. Neale.—p. 30.

Spring Salads. Rules for handling salad ingredients are pointed up, and recipes are included for fresh melon western salad, avocado and seafood salad, and fresh fruit sundae salad. Nineteen unusual garnishing tips are included (directions for different use and preparation of radishes, cucumbers, cherry tomatoes, grapes, and so on). Out-of-the-ordinary serviceware is stressed too—odd shaped bowls and plates and natural bowls, such as melons, oranges, tomatoes, pineapple, avocado, and cucumbers.

INSTITUTIONS

Vol. 43, May, 1961

*Deep fried specialties.—p. 10.

*Modern deep frying equipment.—p. 12.

*The story behind the frozen curtain. J. Y. Wallace.—p. 84.

*Is your designer worth his fee? R. Kramer.—p. 100.

*Moods in restaurant lighting. F. R. Valvoda.—p. 118.

*School lunch management. S. M. Hartt.—p. 179.

*Calculating food service requirements. R. Buchanan.—p. 203.

Deep Fried Specialties. There is no question about the popularity of deep fried foods. Guides to their preparation are presented, including a time-and-temperature chart for items ranging from sandwiches to meats to nuts to desserts. Six basic preparation steps, applying to all deep fried foods, are followed by information on temperature, prepared batters and breadings, fat breakdown, and frying procedures. Over fifty quantity recipes are included, running the gamut of the menu.

Deep Frying Equipment. Methods are explained for determining frying needs, figuring peak demand, and finding the desired fat capacity of the fryer. Advantages of dual or multiple fryers are cited. Advice on the selection and cleaning of equipment is included, and a number of current models of deep fryers are pictured.

Frozen Foods Today. More control, less waste, and less help needed are among the advantages experienced by the many types of food service operations in the Detroit area through the use of preprocessed frozen foods. Kitchen staffs are not being cut, but operators are able to extend existing menus, add flexibility to their operations, and unburden an over-worked staff.

Design Service. The professional design consultant provides more than pretty drawings. Schematic planning comes first—arranging areas and facilities without going into equipment details. While specific equipment is being selected, the interior design phase is also being developed. At this point, cost can be pretty well determined. Detailed drawings and elevations follow, along with decisions on lighting, decor, graphics, colors, and so on. All this is involved in the contract drawing phase. Next comes a complete listing and description of every item going into the project—accomplished in the designer's specifications. A specification for electrical work is illustrated. Competitive bidding is discussed, and the work of the designer during the course of construction and fabrication is pointed out.

Restaurant Lighting. Level or amount of illumination, brightness and contrast, color and its effect on decor and people are the factors which must be determined and integrated in relation to type of restaurant environment. Three types of environment are described—the traffic restaurant, the intimate restaurant, and the leisure restaurant. The advantages of incandescent lighting, the effect of light on color, the importance of the balance of brightness, and the use of entrance and marquee lighting are all discussed.

School Lunch. The National School Lunch Act, approved in 1946, is described. Requirements for participation as stated in USDA regulations are given. Points covered are: use of funds, eligibility of schools, rules of the program, lunch service information, program receipts, program expenditures, and value of donations.

College Food Service Requirements. In planning student food service facilities, these factors must be studied: (a) type of service and character of students, (b) menu pattern, (c) peak load requirement, (d) production quantities, (e) translation of production quantities into equipment types and sizes, and (f) size of the dining room. Statistics from five midwestern universities give a rough rule of thumb for a total space guide. Basic operational practices and policies must be determined in order to do realistic planning. To encourage thinking along this line, twenty-three questions are posed, covering such items as frequency of deliveries, method of food disposal, length of service period for each meal, and determination of operating statement. Nine factors relating to general layout are outlined. Also, in chart form, a comparison is made of major equipment used by ten universities.

THE MODERN HOSPITAL

Vol. 96, April, 1961

*There's method to this food service plan. S. J. Soltis and K. D. Spencer.—p. 134.

*Training helps food service employees see how diet is related to disease. M. E. Graham.—p. 144.

*Ice cream is economical dessert—especially if you make it yourself. J. Hartman.—p. 146.

Food Service Plan. The food service operation of the 200-bed Beckley (West Virginia) Memorial Hospital is described. The kitchen layout is illustrated and discussed. Operation of the centralized tray service for patients is explained.

Employee Nutrition Classes. At the Fort Howard Division VA Hospital, Baltimore, a series of nine classes has proved successful in teaching dietary personnel the basic principles of dietetics and creating greater interest in their work. Following discussion of the source and function of the various food elements, reasons for different diets were explained. The effects of various diets on diseases or malfunctioning organs were considered. Techniques and materials used in teaching about ulcers and a bland diet, liver malfunction, a sodium-restricted diet, diabetes, and the heart and kidneys are described.

Economical Dessert. Ice cream can be made easily by purchasing ice cream mix from a local dairy. Average cost of a 12 per cent butter fat formula is $1.40 per gallon. This yields 2 gal. of the frozen product, reducing cost to 70 cents per gallon, to which is added the cost of flavoring (ranging from 3 cents for vanilla to 10 or 20 cents for fruit flavorings). Sherbets cost between 50 and 55 cents per gallon, and fresh fruit ices 25 to 30 cents. It pays to make ice cream in an institution of 200 beds or more, if the dessert is served at least twice a week. Equipment is discussed.

PERSONNEL JOURNAL

Vol. 39, April, 1961

*Line and staff in personnel administration. K. O. Mann.—p. 460.

*Puzzle and perplexity in executive development. C. Argyris.—p. 463.

Nature of Line and Staff. Personnel activities consist of both line and staff functions (line functions being those activities which are performed to achieve the primary objectives of an organization; staff functions being those activities which seek to help not only those who perform line functions, but also those who carry out other staff functions). These activities are directed by line, functional, and staff authority. These types of authority are defined and illustrated, in order to shed light on existing relationships.

Executive Development. A group of top executives, working in an atmosphere of encouragement and enthusiasm consider these circumstances of prime importance in facilitating their work. Responses from this group as to an "ideal program" for self-development led to confusing answers, however. Executive trainers believe that line executives should be responsible for their own development; yet, in the majority of the programs, it is the trainers who define the content of the course, the methods of training, the sequences of subject and method, the objectives, the time periods, the values to be taught, the basic assumptions to be promulgated. Furthermore, seldom is the line executive placed in a training situation where he will tend to experience his own behavior; it is more likely to be a situation where he will focus on behavior that the trainer thinks is important and that the trainer brings out through "appropriate devices." From other perplexities along the same line, the question arises: "Are training people behind the times, not aware of the latest findings regarding self-development?"

WHAT'S NEW IN HOME ECONOMICS

Vol. 25, May, 1961

*Enrichment celebrates twentieth anniversary. —p. 22.

Enrichment Anniversary. The need for an enrichment program was acted upon during the 1930's when it became apparent that there was a low level of intake of the most important B-vitamins—thiamine, niacin, and riboflavin, with resulting deficiency diseases. The history of bread enrichment (and of other cereal products) is cited. Today, there are enrichment laws in twenty-nine states. Dr. W. H. Sebrell, Jr., is quoted as saying, "While numerous factors have contributed to this improvement, we feel sure that they could not have been attained on an average intake of thiamine, niacin, riboflavin, and iron as low as we had in this country in the thirties prior to the enrichment program." Methods of flour and bread enrichment are described briefly.

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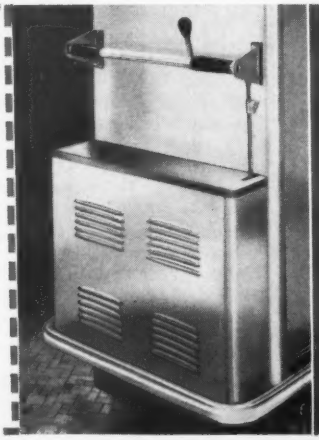

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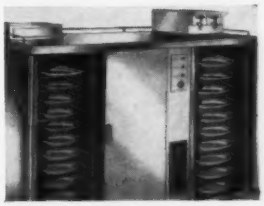
- **Efficient electrical system** . . . conveniently located control panel—saves extra time and steps.
- **Radiant 750-watt heating system** . . . thermostatic control with ten settings—full adjustment at various heat ranges.
- **Double-walled insulated doors with positive latch** . . . seals heat in . . . no leakage between hot and cold sides!
- **Dutch doors on hot compartment** . . . retains heat during serving.
- PLUS NUMEROUS OTHER EXCLUSIVE BLICKMAN-BUILT FEATURES!!



SPECIAL FEATURE!

"Convertible" hot compartment—choose drawers or Twin-Tray feature for simplified loading and tray assembly!

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Gentlemen:
Please send, at no obligation, your new 6-page Blickman-Built Foodveyor brochure.

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Your 44th Annual Meeting

October 24-27, 1961
St. Louis, Missouri

JUST AS the wheels of the St. Louis riverboats turned in the nineteenth century, our own twentieth century wheels are turning in preparation for the largest and best meeting in ADA's history.

In this issue, we shall tell you about a few of the speakers who have material well worth your attention. Here, also, is a glimpse of St. Louis as an industrial center, followed by some interesting statistics on our exhibitors.

Later issues will bring you more about the "Crossroads of the Nation," places of interest to visit, and more about the speakers.

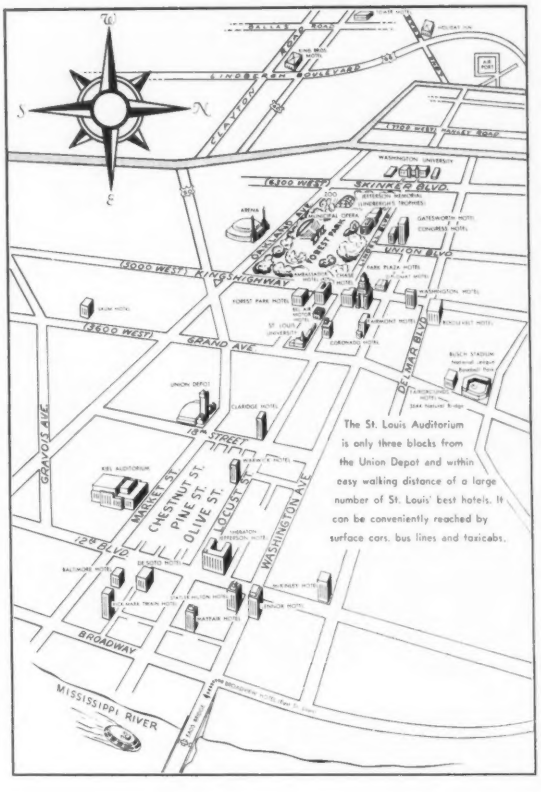
St. Louis—Industrial Center

Since its founding in 1764, St. Louis has become one of the nation's leading industrial centers, producing an amazingly wide range of items. From its beginnings as a fur trading post, St. Louis has become the eighth largest city in the U. S. and the largest in Missouri.

The geographical position of St. Louis has been a leading factor in its growth. The city lies in the central part of the nation—949 mi. west of New York, 2218 mi. east of San Francisco, and 694 mi. north of New Orleans.

The advent of river steamboating in 1817 helped St. Louis to prosper commercially. The *Zebulon M. Pike*, first steamboat to reach St. Louis, was soon followed by a vast array of steam-propelled vessels which made the city an inland water trade center. In 1854, the former fur trading post ranked third among U. S. cities with regard to tonnage, quite a feat for a city which is surrounded by the United States.

In the latter part of the nineteenth century, railroad travel began rising to importance. When river traffic declined in 1870, St. Louis emerged as a rail center.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LOCUST ST.
WASHINGTON AVE.
BROADWAY
MISSISSIPPI RIVER
The St. Louis Auditorium is only three blocks from the Union Depot and within easy walking distance of a large number of St. Louis' best hotels. It can be conveniently reached by surface cars, bus lines and taxicabs.

The Program

TUESDAY, OCTOBER 24

Leroy Burney, M.D., opening speaker —Former Surgeon General, U.S. Public Health Service; currently on appointment with the World Health Organization, Geneva, Switzerland —"World Health Problems of Today, Including Aspects of Nutrition"

George Axinn, Ph.D., Director, Institute for Extension Personnel, Michigan State University, East Lansing —"Strategy of Communication"

R. G. Seymour, Ph.D., Director, Executive Development Center, University of Illinois, Urbana—"Administration in Interpersonal Relations"

Business Meeting for members of A.D.A. — "Reflecting What The A.D.A. Has Done and Where It Is Going"

Evening Session

James A. McCain, Ed.D., President, Kansas State University, Manhattan—"Dietetics and the Two Cultures"

Robert Shank, M.D., Head, Department of Preventive Medicine, Washington University School of Medicine, St. Louis—"Latest Advances in Nutrition"

WEDNESDAY, OCTOBER 25

F. Howell Wright, M.D., Chairman, Department of Pediatrics, Bobs Roberts Hospital, University of Chicago Clinics — "Preventive Weight Control Programs from the Angle of the Well-Baby Clinic"

J. Roswell Gallagher, M.D., Chief, Adolescent Unit, Children's Hospital, Boston—"Preventive Weight Control Programs for the Adolescent"

Walter W. Hamburger, M.D., Associate Professor of Psychiatry, School of Medicine and Dentistry, University of Rochester, Rochester, New York—"Preferred Weight"

Jean Mayer, Ph.D., D.Sc., Associate Professor of Nutrition, Harvard School of Public Health, Boston—"Mechanism of Appetite and Weight Control"

THURSDAY, OCTOBER 26

Elizabeth M. McCune, Assistant Director, Department of Dietetics and Nutrition, University of Kansas Medical Center, Kansas City, Kansas—"Dietitian's Concept of Quality Food and the Lay Person's Concept of Quality Food"

Margaret A. Ohlson, Ph.D., Director, Department of Nutrition, University Hospitals, State University of Iowa, Iowa City; and Mildred Jones, Assistant Manager in Charge of Food, Residence Halls, Michigan State University, East Lansing—"Points of View on Selective and Non-Selective Menus"

FRIDAY, OCTOBER 27

Olaf Mickelsen, Ph.D., Chief, Laboratory of Nutrition and Endocrinology, National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda, Maryland—"Relationship between Nutrition and Dental Caries"

IMPORTANT . . . MAIL YOUR APPLICATION PROMPTLY

Application for Housing Accommodations

THE AMERICAN DIETETIC ASSOCIATION

St. Louis, Missouri • October 24-27, 1961

For your convenience in making hotel reservations for the coming meeting of THE AMERICAN DIETETIC ASSOCIATION, hotels, with rates, are listed below. Use the form at the bottom of this page, indicating your first, second and third choice. Because of the limited number of single rooms available, you will stand a much better chance of securing accommodations of your choice if your request calls for rooms to be occupied by two or more persons. All reservations must be cleared through the Housing Bureau. ALL REQUESTS FOR RESERVATIONS MUST GIVE DEFINITE DATE AND HOUR OF ARRIVAL AS WELL AS DEFINITE DATE AND APPROXIMATE HOUR OF DEPARTURE, ALSO NAMES AND ADDRESSES OF ALL PERSONS WHO WILL OCCUPY ACCOMMODATIONS REQUESTED MUST BE INCLUDED.

Hotel	Single Bed	Double Bed	Twin-Bedded	Suites
Chase-Park Plaza	$10.00 - 16.00	$13.00 - 18.00	$14.00 - 22.00	$23.00 - 75.00
Coronado	8.95 - 14.00	11.00 - 15.50	13.50 - 18.00	20.00 - 50.00
Lennox	8.50 - 14.00	10.00 - 12.50	14.00 - 16.00	25.00 - 40.00
Mayfair	8.50 - 15.00	10.00 - 16.00	14.00 - 15.00	26.00 - 50.00
Pick-Mark Twain	7.25 - 9.25	9.25 - 11.50	12.00 - 13.25	19.50 - 29.00
*Sheraton-Jefferson	7.50 - 9.75	10.50 - 13.75	11.25 - 18.00	25.00 - 45.00
Statler-Hilton	8.00 - 11.50	11.00 - 14.50	13.00 - 15.00	29.50 - 36.50
Warwick	5.50 - 8.00	8.50 - 12.00	9.50 - 12.00	

In the event that the hotel room rate structure is changed prior to the above convention these rates will be changed accordingly.

*Headquarters hotel.

ALL RESERVATIONS MUST BE RECEIVED PRIOR TO SEPTEMBER 24, 1961

Convention Reservation Bureau, A.D.A.
911 Locust Street, Room 406
St. Louis 1, Missouri

Please reserve the following accommodations for: THE AMERICAN DIETETIC ASSOCIATION CONVENTION in St. Louis, October 24-27, 1961.

Single Room_____ Double-Bedded Room_____ Twin-Bedded Room_____

2 Room Suite_____ Other Type of Room _____

Rate: From $_____ to $_____ First Choice Hotel_____

Second Choice Hotel_____

Third Choice Hotel_____

Arriving at Hotel (date)_____hour____A.M.____P.M. Leaving (date)_____

Hour____A.M.____P.M.

THE NAME OF EACH HOTEL GUEST MUST BE LISTED. Therefore, please include the names of both persons for each double room or twin-bedded room requested. Names and addresses of all persons for whom you are requesting reservations and who will occupy the rooms asked for:

_____

_____

_____

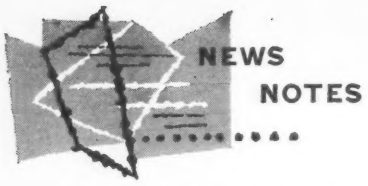
(Individual Requesting Reservations)

Name _____

Address _____

City and State _____

If the hotels of your choice are unable to accept your reservation the Housing Bureau will make as good a reservation as possible elsewhere provided all hotel rooms available have not already been assigned.



A.D.A. Officers for 1961-62. A report from the A.D.A. Tellers Committee indicates that the following will be the elected officers of the Association for the coming year.

PRESIDENT—Adelia M. Beeuwkes, Associate Professor of Public Health Nutrition, University of Michigan School of Public Health, Ann Arbor

PRESIDENT-ELECT—Edith A. Jones, Chief, Nutrition Department, The Clinical Center, National Institutes of Health, Bethesda, Maryland

SPEAKER OF THE HOUSE OF DELEGATES—A. June Bricker, Ph.D., Executive Secretary, American Home Economics Association, Washington, D. C.

SPEAKER-ELECT OF THE HOUSE OF DELEGATES—Miriam E. Lowenberg, Ph.D., Head, Department of Foods and Nutrition, Pennsylvania State University

TREASURER—Wintress Dalbey Murray, Supervisor of Nutrition Services and Director, Administrative Dietetic Internship, Eastman Kodak Company, Rochester, New York

SECRETARY—Virginia F. Harger, Associate Professor in Institution Management and Director, Administrative Dietetic Internship, The Ohio State University, Columbus

DELEGATES-AT-LARGE

Grace S. Shugart, Kansas State University, Manhattan—1962

Mary C. Zahasky, University of Oklahoma Medical Center, Oklahoma City—1963

Geraldine M. Piper, Chronic Disease Program, U. S. Public Health Service, Washington 25, D. C.—1964

NOMINATING COMMITTEE

Chairman—Grace E. Olsen, Iowa State University — Geographic Area IV

Frances L. Ware, Rhode Island Hospital, Providence — Geographic Area I

Elizabeth A. Lounds, Medical College of Virginia — Geographic Area II

Myrtle B. Van Horne, Michigan State University — Geographic Area III

Maxine Merrick, VA Hospital, San Francisco—Geographic Area V

New Nutrition Chair at Columbia. A new distinguished professorship in the nutritional sciences, to be named the "Robert R. Williams Professorship," has been established in the Institute of Nutrition Sciences, Columbia University. A special, half-million-dollar endowment fund from the Research Corporation has been presented to Columbia to take care of this new professorship. The endowment is supported jointly by the Williams-Waterman Fund for the Combat of Dietary Diseases and the Research Corporation, which administers the Williams-Waterman Fund. Dr. Williams, for whom the new professorship is named, was the first to synthesize thiamine.

British Honor for Dr. McCollum. A recent letter to the JOURNAL from Dr. Elmer V. McCollum, Professor Emeritus of Biochemistry, The Johns Hopkins University, Baltimore, informs us that he has recently been selected a Foreign Member of The Royal Society of London.

Nutrition Foundation Expands. In a reorganizational move designed to implement a broadened public service program, the Nutrition Foundation has announced the promotion of Dr. Charles Glen King from Executive Director to President. Charles G. Mortimer, Chairman of General Foods Corporation, who has been President, has assumed the title of Chairman of the Executive Committee. Daniel F. Gerber, President, Gerber Products Company, formerly Vice-President of the Foundation, has been named Vice-Chairman of the Executive Committee.

In making the announcement, Dr. James R. Killian, Jr., Chairman of the Board of Massachusetts Institute of Technology and Chairman of the Nutrition Foundation's board of trustees, said that a scientific director and business manager will also be added to the Foundation's staff. Dr. Horace L. Sipple will continue as Executive Secretary and Treasurer and Jo H. Chamberlin as Director of Public Information. Under the direction of a business manager, still to be selected, a membership drive will be launched to increase the participation of companies in the food and related industries. Membership currently stands at fifty.

National Health Council Appointment. An announcement tells of the appointment of Peter G. Meek as Executive Director of the National Health Council. Mr. Meek, who takes up his new duties on August 1, has been Director of the New York Office and Northeast Regional Representative for the National Society for Crippled Children and Adults. He has also served as Assistant Director of the Commission on Chronic Illness and the Bureau of Public Assistance of the Social Security Administration.

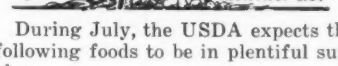
New Graduate Programs. At the University of California, Berkeley, two new graduate programs in public health nutrition and community nutrition will be inaugurated during the coming year. One, leading to a Master of Public Health, is planned especially to prepare students for nutrition work in public health agencies. The second, leading to a Master of Science, is designed to provide training in nutrition work in the Agricultural Extension Service and other community agencies. The programs will include: (a) course work in the Department of Nutritional Sciences, School of Public Health, and other departments of the University; (b) field work concurrent with academic study; (c) two to three months of full-time, off-campus field work in an approved community agency; and (d) satisfactory completion of a comprehensive examination or a thesis.

The minimum requirement for admission in either program is a baccalaureate degree in foods and nutrition, or its equivalent, or a medical degree, from an approved college or university. Students meeting all prerequisites may complete the program in two semesters of graduate residence and two months (three months in the case of physicians) of off-campus field work.

Further information about the programs may be obtained by writing to Dr. Ruth L. Huenemann, School of Public Health, University of California, Berkeley 4.

DuBois Scholarships. For the ninth consecutive year, the T. V. DuBois Scholarship Program will aid dietetic interns through scholarships awarded to various state dietetic associations. This year, scholarships have been donated to the following state associations: Colorado, Connecticut, Georgia, Maryland, Minnesota, Mississippi, Montana, Nebraska, Oregon, and Utah. All told, more than a hundred dietetic interns have been helped in the nine years of the DuBois Scholarship Program.

Letters of application from state dietetic associations are reviewed each year in early January by the DuBois Scholarship Committee. Factors governing their decisions are generally concerned with the expressed need, as well as the availability of funds. Selection of the individual recipients of scholarships remains in the hands of the state dietetic associations.



During July, the USDA expects the following foods to be in plentiful supply:

Protein foods

Shrimp—fresh, canned, and frozen
Turkeys

Other foods

Peaches
Plums
Summer vegetables

Frozen Foods in July. Attractive food and colorful plates are important in hot weather, when appetites lag. The National Association of Frozen Food Packers points out that frozen fruits and vegetables lend welcome brightness and flavor to hot-weather meals and especially recommends the following for July:

The new compact food that supplies a nutritional "boost" many diets need

Kellogg's Concentrate

now available in "single-serving" size

Quick, exact portion control is yours with the new 1-ounce package of Kellogg's Concentrate. Served as a cereal, it's an especially convenient way to increase protein, vitamins, and minerals at breakfast.

ONE OUNCE CONTAINS

PROTEIN—11.3 gm. More than an egg and 2 strips of bacon.
IRON—5.0 mg. As much as 2 ounces of beef liver.
VITAMIN B_1—0.5 mg. (thiamine). As much as 3 ounces of pork.
RIBOFLAVIN—0.6 mg. More than 3 ounces of Cheddar cheese.
NIACIN—5.0 mg. More than 3 ounces of beefsteak.
VITAMIN C—15.0 mg. About as much as a 4-ounce glass of tomato juice.
VITAMIN B_6—1.0 mg. More than 5 carrots.
VITAMIN B_{12}—2.5 mcg. As much as in one ounce of meat or fish.
VITAMIN D—200 USP units. As much as 2 glasses of vitamin D milk.

Carbohydrate 54.8%, 15.5 gms. per ounce. Also contains **PHOSPHORUS** and **CALCIUM.**

NO COOKING—
NO REFRIGERATION NEEDED

WHAT IT IS:

Kellogg's Concentrate is a new kind of food. A new compact food containing more essential nutrients—protein, vitamins and minerals—than any other all-purpose food.

It comes to you in tiny, crisp, good-tasting flakes that are ready to eat.

HOW YOU USE IT:

Served as a cereal or added to other cereals, Concentrate makes a delicious, substantial breakfast; a sustaining, low-calorie snack at any hour. Sprinkle it on casseroles, soups, salads, fruits, vegetables, and even desserts.

Or use as an ingredient in meat loaves, stuffings, and other favorite dishes.

WHAT IT DOES:

Concentrate provides the nutritional boost many meals lack. It contains 40% high-quality protein, yet less than 1% fat. A 1-oz. serving contains only 106 calories.

Order Kellogg's Concentrate in the handy new 1-oz. "individuals", or the regular 6-oz. size. (Individual portion control creamers are available from your local Kellogg's salesman at $1.40 per dozen.)

Kellogg's OF BATTLE CREEK

Frozen Fruits

STRAWBERRIES—No washing or hulling needed with frozen berries, and everyone wants shortcake in summer.

CONCENTRATED JUICES AND ADES—Here are space-savers and variety-givers for the cool-summer-drink lovers who like genuine fruit flavor in their fruit beverages.

Frozen Vegetables

ASPARAGUS—Salads made of just-cooked-and-chilled asparagus are popular surprises in summer; serve with cheese sauce as a luncheon entrée in summer.

GREEN BEANS—Combine with frozen corn, Lima beans, or crookneck squash.

CARROTS—In ready-to-cook form, frozen carrots can be served in a matter of minutes, lending special dash to the plate.

POTATO PRODUCTS — Frozen French fries are a good accompaniment for a salad meal. Their semi-processed form helps make it possible to keep kitchens cool in summer.

Publication on Additives. *Food Additives—What They Are/How They Are Used* is a new reference handbooklet which covers many aspects of food additives in popular, readable language. A major portion of its contents is devoted to the "how and why" of scientific achievements applied to the food industry. Food additives are defined, their development explained, and the types discussed, including nutrient supplements, leavenings, mold inhibitors, emulsifiers, flavors, and spices. One section outlines the steps involved in establishing the safety of food additives and the federal legislation relating to them. The appendix lists some of the most commonly used food additives which are approved. Single copies of this publication may be requested from the Manufacturing Chemists Associates, Inc., 1825 Connecticut Avenue, N.W., Washington 9, D. C.

This publication is only the first step in an industry information program on food additives which the above Association will conduct. In addition, the Association plans to issue several "how to" supplements for professional persons with suggestions for making the subject of food additives more meaningful to those with whom they come in contact. A periodic newsletter on facts about food additives and two film strips on the history of the world's food supply will also be developed.

Booklet on Communication. *Learning More about Communication* is a twenty-four-page booklet by Irving S. Shapiro, Ph.D., released by the National Public Relations Council of Health and Welfare Services, Inc., (257 Park Avenue South, New York 10). In it, the author considers what's known about communication, with a view to making communication more efficient and productive. He defines communication, considers both the communicator and receiver, and discusses the problems of recognizing limits and ways of looking at the message and the importance of testing and experimentation for communication effectiveness. He emphasizes and examines the role of the communicator. Twenty-nine references are included. Copies may be ordered from the Council for $1 each.

Government Publications. A comprehensive and official report of the White House Conference on Aging, January 9 to 12, 1961, has been issued by the Department of Health, Education, and Welfare. The three major sections cover: origins, objectives, and procedures of the Conference; the Conference and its program; and the outcomes of the Conference. In the latter, chapters deal with such topics as rehabilitation, social services, housing, family life, free time activities, religion, and research. Four chapters deal with local, state, voluntary, and federal organizations and their programs. Copies may be ordered for $1.25 each from the Government Printing Office, Washington 25, D. C.

* * * * *

Nursing Home Standards Guide has been prepared by Public Health Service's Division of Chronic Diseases as a result of an exhaustive review of existing state laws, rules, and regulations relating to licensure and operation of nursing homes. Prepared in response to requests from interested groups and agencies, this report is a synthesis of the better standards contained in existing laws, plus suggested standards which should be incorporated into state laws and regulations. The chapter on patient care takes up individual services in the nursing home in detail, including the food service. Facets considered include: food and nutrition needs, meal hours, menus, modifications in regular diets, food preparation, food supply, serving of meals, procedure manuals, and food service personnel. In the chapter on physical facilities, recommendations for dining areas are set forth in detail, while food service sanitation is included under "Plant Safety, Maintenance, and Operation." This report (Public Health Service Publication No. 327) may be ordered for 45 cents a copy from the Government Printing Office, Washington 25, D.C.

* * * * *

"Quantity Recipes Using Dried Whole Egg Solids" is the title of the USDA's newest recipe release, PA-437. Almost twenty recipes are presented, all scaled for 100 portions. Included are a cornbread mix and a muffin mix, with variations suggested for the latter. A table of equivalents for reconstituting dried whole eggs should be especially helpful, as will be the three pages of general information on using dried eggs. Copies are on sale at the Government Printing Office, Washington 25, D. C., for 15 cents each.

* * * * *

A second new USDA release deals with "Costs, Net Margins, and Selling Prices of Beverages Sold in an Employee Food Service" (Marketing Research Report No. 464). Interestingly, but not surprisingly, coffee accounted for half of all beverage sales and for three-fourths of the beverage profits (it had the highest margin rate) in a two-week study made in an industrial eating facility in an office building. During that time, 123,000 customers were served; about 53 per cent for coffee breaks, 39 per cent for lunch, 6 per cent for breakfast, and 2 per cent for dinner. A total of 106,000 beverage sales was made, of which 56 per cent was for coffee, 17 per cent for tea, 14 per cent milk, and 13 per cent other beverages. Costs were lowest for snack bars and highest for dining room and conference room service (due to labor costs), which were three times as much as for the snack bars. Food costs were the same for all service locations. Single copies of this report may be requested from the USDA's Office of Information.

New FAO Reports. Just issued are three new additions to the FAO Nutrition Meetings Report Series.

The first, No. 25, is *Report of the FAO/WHO Seminar on Problems of Food and Nutrition in Africa South of the Sahara.* At this meeting, which took place in Lwiro, Bukavu (Congo), 18-29 May 1959, information acquired during the past ten years was reviewed to synthesize it on both the national and regional levels; methods used, as well as applied nutrition programs, were studied critically; and recommendations were made with regard to future work, both in the field of research and practical application. The report covers a review of knowledge on food and nutrition, practical measures for solving food and nutrition programs, training of personnel, organization of nutrition services and research. Of special interest are two appendices which deal with techniques of food consumption surveys, and practical methods for evaluating nutritional status. A "table of practical allowances" is also included. This report is available for $1 a copy from the International Documents Service, Columbia University Press, 2960 Broadway, New York 27.

Training of professional workers at university and college levels was the topic of discussion reported in the second booklet, *Report of the Symposium on Education and Training in Nutrition in Europe* (No. 26 in the series). Special attention was given to training in the following disciplines: applied nutrition and dietetics, medicine and public health, home economics, agronomy, and school teaching. The discussions included the questions of national food policies, the problems of changing food habits, as well as various aspects of training

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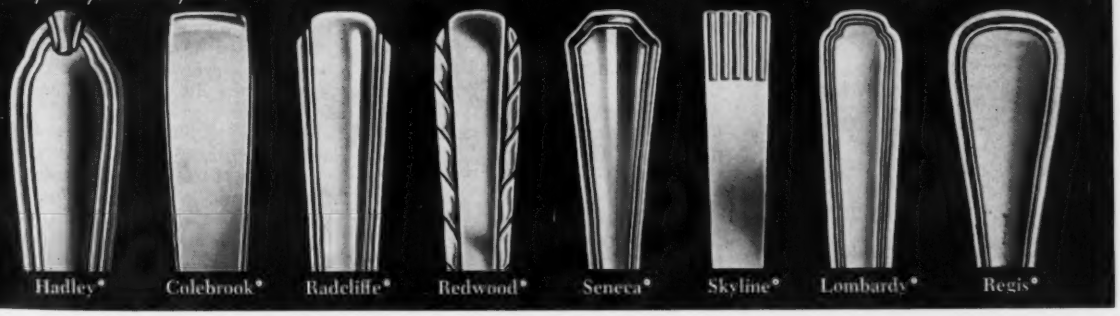

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ROLLS
FISH PATTIES
PEAS
CORNED BEEF
BAKED POTATOES

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Thermotainer®
...without Flavor Transfer!

There is no limit to the many different types of food you can store for hours without flavor transfer when you have a compartmented Thermotainer electric food warmer.

Thermotainer's unique construction helps you cut costs and speed service. Food will not dry out or become soggy, because Thermotainer's "Channeled Heat" circulates around the compartments—never in the compartments. You can prepare food well in advance of serving time—and hold it until needed.

More than 96 models are available to solve your hot food storage problems. There are pass-thru types to save steps between kitchen and serving areas . . . undercounter and back bar units . . . portable models to speed service to remote locations.

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- Full-range thermostatic control
- Easy-load shelf-type doors
- Stainless steel throughout
- Adjustable slides for shallow, medium and deep pans
- Moisture control

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Sold only through authorized dealers. Write for your copy of the complete Thermotainer catalog

FRANKLIN PRODUCTS CORP.
400 W. Madison Street Chicago 6, Ill.

personnel. This report sells for 50 cents a copy and may be ordered from the same source.

The third report is concerned with the *European Seminar on Evaluation of Home Economics Extension Programs*, held in May 1960 in Vienna. This meeting was the first to provide an opportunity to discuss in detail how the needs of rural families may be determined, the objectives of evaluation, and methods and techniques which may be used in evaluating home economics extension programs. In preparation for the seminar, a pilot study was carried out in Austria "to collect background information about living conditions of rural families and, in particular, the life and work of rural women, and to determine ways and means whereby the scope and content of home economics extension programs might be appraised." The discussion centered around the uses and purposes of evaluation, its relation to the home economics extension program cycle, and the evaluation process itself. This report, No. 27 in the series, also sells for 50 cents a copy, and may also be ordered from the International Documents Service, Columbia University Press.

How Much Do "Big Eaters" Eat? The problem of just how much more than the average "big eaters" eat has been studied for certain groups of foods by USDA specialists. From survey figures, statisticians calculated that people who use large quantities of milk, ice cream, and cheese used about one and a half times as much as average consumers. Those who eat a great deal of meat, poultry, and fish use a little over one and a half times as much as the average. As for commercially frozen fruits and vegetables, big eaters of these foods consume about three and a half times the average. The study also shows that people who eat large quantities of specific food items consume up to nine times as much as average—nine times as much processed milk, six times as much veal, four times as much frozen concentrated fruit juices, and three times as much of flour mixes.

Armed Forces' Favorite Foods. In the Navy, the all-time morale booster is hot breads. Other choices are steak, deep-fried foods, ice cream, desserts, salads, and coffee. Coast Guardsmen prefer steak with potatoes, or for Sunday brunch, steak and eggs—and the steak is done to "order," whether rare or practically reduced to carbon. Marines like all kinds of food and plenty of it. The Army voted for southern fried chicken. Within the Air Force, grilled steak and French fries are among the "top ten," and strawberry shortcake is the all-time favorite. Simply prepared foods get the nod, salads do not rate very high, and vegetables are the least liked (corn on the cob and fresh tomatoes the only popular items), though adding the simple word, "buttered" on a menu, increases acceptability!

New Types of Dehydrated Vegetables. A new means of dehydrating potatoes, carrots, and other vegetable pieces that will require only about 5 min. of simmering to make them ready for eating is under development at the USDA's Eastern Utilization and Research Development Division near Philadelphia. The new process gives vegetable pieces a porous structure that enables them to rehydrate more quickly, thus reducing cooking time from the usual 15 to 30 min. to about 5. After this short time in boiling water, the pieces resume their original shape and become tender and palatable. Excellent instant dehydrated diced carrots have been produced by the new process and good progress is being made in adapting it to potatoes, as well as other vegetables and fruits. Before the process is recommended for commercial use, cost estimates and storage tests will be made.

Storing Precooked Meats. Packaged, cooked ham slices keep better in the freezer than the refrigerator, it has been learned at the Kansas Agricultural Experiment Station, Manhattan. Dr. William A. Miller conducted work to learn why packaged, cooked sliced ham and other luncheon meats frequently acquire a "buttermilk odor" and a slightly "soured" flavor in home refrigerators. He found off-flavors and high bacteria and yeast counts in several samples of sliced, ready-prepared, packaged ham slices kept in a refrigerator at 45°F. from four to seven days. Considerably less bacterial growth occurred in vacuum-packed packages, but with freezer storage, bacterial growth was suspended and thus the flavor of these packaged prepared meats was not affected.

Egg Grades. The need for consumer education in relation to the USDA grading system for eggs was indicated by a recent survey conducted by J. R. Roush, Illinois Extension Marketing Specialist. In one urban area, homemakers were asked to choose the eggs they preferred from a display of unlabeled eggs out of the shell. Their choices were the high quality eggs. Yet a check of the eggs they had in their kitchens showed that only 26 per cent had Grade AA or A eggs and about 31 per cent had C quality or below. Interviews indicated that the homemakers did not understand what the U.S. egg grades mean. They frequently associated size with grade and were uncertain of the quality characteristics of the different grades, even though they had recognized them in eggs out of the shell. About half of the homemakers bought eggs in grocery stores; the other half from farmers or door-to-door sellers of farm eggs. Those who buy in stores knew more about grades than the others.

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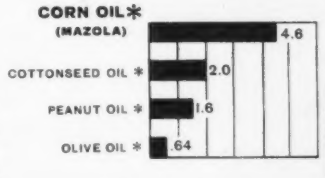

*U. S. Dept. of Agriculture Reports—1959

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COMPOSITION OF MAZOLA CORN OIL

Mazola Corn Oil has the following average composition:

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Monounsaturates	28-36	7.5-9.7
Saturates	10-14	2.8-3.8
Natural Sitosterols	1 (0.9-1.3)	0.14
Natural Tocopherols	about 0.1	0.015
Cholesterol	none	none
Salt (Sodium chloride)	none	none

Calories—125/tablespoon
Iodine value—124 average

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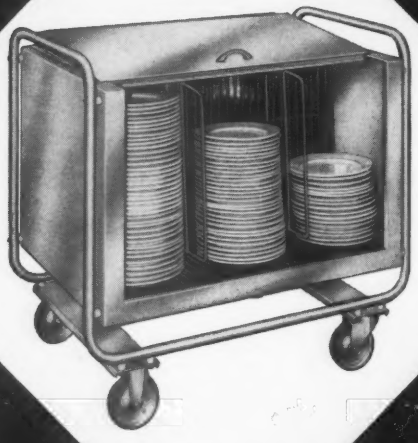

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Army Personnel Announcements. The following changes in personnel of the Army Medical Specialist Corp have been made:

PROMOTIONS

From Major to Lt. Colonel
Nancy L. Huston

From Captain to Major
Mary Armstrong
Barbara Kennon
Mary Sue Lowe
Marjorie Pabst
June Williams

From 1st Lt. to Captain
Katie S. Hix

From 2nd Lt. to 1st Lt.
Joan Bajorinas
Katie Boyd
Diana Chee
Mary D. Cole
Christene Ellis
Joan Fox
Frances Iacoboni
Janet Jolin
Linda Lay
Barbara Lynch
Patricia Miller
Patricia Murray
Virginia Parrish
Ann Ritchie
Donna Schrempp
Elaine Schultz
Alice K. Sims
Theodocia Temple
Suzanne Weis
Marian Willis

REGULAR ARMY APPOINTMENTS
Capt. Janice Arundel

APPOINTMENTS AND ASSIGNMENTS TO ACTIVE DUTY
2nd Lt. Roberta Clary
2nd Lt. Rachel Holter
2nd Lt. Cynthia M. Horn
2nd Lt. Jacqueline Jankowski
2nd Lt. Jane F. Sager

SEPARATIONS
Capt. Mary Blair
Capt. Helen M. Collins
Capt. Betty S. Rehn
1st Lt. Regina Onda
1st Lt. Alice K. Sims

RETIREMENT
Lt. Col. Alene Ness Elliott

News of State Associations

Colorado Dietetic Association. On June 15, 16, and 17, a workshop on diet therapy was conducted jointly by the Colorado Dietetic and Hospital Associations in Denver. The program included the following papers:

"Diet in Hepatic and Renal Diseases"—Dr. Joseph Holmes
"Dietary Treatment of Cardiac Conditions"—Dr. Ray Pryor
"Dietary Treatment of Diabetes"—Dr. Paul Sheridan
"Diet and the Allergic Patient"—Dr. DeRoy Slagle
"Diet in Ulcer Management"—Dr. Thomas Witten

Georgia Dietetic Association. The

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VA Center at Dublin was the scene of the spring meeting of the Georgia Dietetic Association on May 5. The program featured:

"Oral Insulins and Treatment of Diabetes"—A. M. Tournow, M.D., VA Center, Dublin
"School Lunch in Georgia"—Margaret Roper, Assistant State Supervisor, School Lunch Program, Waycross
"Solving Our Feeding Problems through Physical Medicine and Rehabilitation"—L. A. Tarbell, M.D., VA Center, Dublin
"The Heart Disease Control Program"—John R. McDonough, M.D., U.S. Public Health Service, Claxton
"The Dietitian and Heart Research"—Sara Stulb, Nutritionist, Heart Research Project, Evans County Health Department, Claxton
"Drugs vs. Diet in Low-Sodium Regimens"—E. L. Hebert, M.D., Acting Chief of Medical Service, VA Center, Dublin

A highlight was the presentation at the lunch of a scroll of appreciation to Peggy Newsom. Mrs. Newsom was a charter member and organizer of the Atlanta and Georgia Dietetic Associations and has served as President of both organizations. The scroll was presented on the occasion of her recent retirement.

Massachusetts Dietetic Association. At the Eighth Annual Food Management Seminar held recently at Amherst, the Masachusetts Dietetic Association planned and presented a panel discussion on women's place in this changing industry. With the overall title of "From Our Kitchen to Yours—Let's Share and Compare," food service in colleges, commercial establishments, hospitals, and industry was discussed by: Quindara Oliver Dodge, Simmons College, Boston; Martha Cummings, School Food Service, Wakefield; Effie May Winger, New England Deaconess Hospital, Boston; and Janice Hannin, Marshall Food Service, Lexington.

Montana Dietetic Association. Montana dietitians met on April 15 in Bozeman for a luncheon and afternoon program, which featured: a discussion of dietary fat and blood cholesterol by R. R. Roehm; a showing of the A.D.A. film strip, "Take a Good Look"; a roundtable discussion on diet therapy; and a tour of the new convenience kitchen for handicapped homemakers at Herrick Hall on the University of Montana campus.

New Hampshire Dietetic Association. In May, the New Hampshire Dietetic Association celebrated the twenty-first anniversary of its founding. To commemorate the event, a history of the Association was prepared by A. Katheryn Royce and published in the Association's Bulletin.

South Dakota Dietetic Association. The Annual Short Course for Hospital

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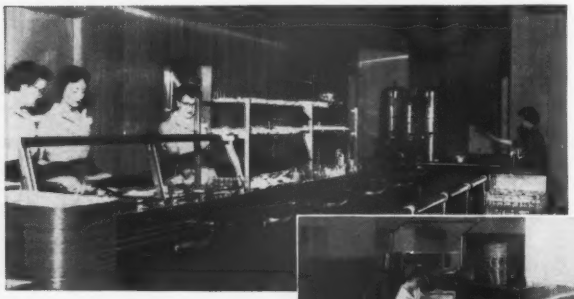
Cooks sponsored by the South Dakota Dietetic Association was held this year on June 22 at South Dakota State College, Brookings. The program included a salad demonstration, small group meetings for discussions of menus, and a talk on sanitation.

Virginia Dietetic Association. On April 27 and 28, the Virginia Dietetic Association met at Virginia Beach. The program featured:

"Gull's Eye View of Dietetics
... Relating to Virginia" — Mary Kelly, President, Virginia Dietetic Association
... Relating to The American Dietetic Association"—Miriam E. Lowenberg, Ph.D., Pennsylvania State College, University Park
... Relating to New A.D.A. Membership Requirements"—Kathryn Heitshu, Medical College of Virginia, Richmond
"Food as Children See It"—Dr. Lowenberg
"Food Thievery"—Leslie E. Kittredge, Manager, Wm. J. Burns Detective Agency, Richmond
"Opportunities and Challenges in Today's Medical Legislation"—Richard Nelson, Field Representative, American Medical Association
"Equipment Specifications and Blueprint Reading"—a share-and-compare session
"Those 900 Calories and Other Liquid Feedings"—a share-and-compare session



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Career Guidance in the States

By FRANCES W. MARGUT
A.D.A. Career Guidance Chairman

It was Theodore Roosevelt who said: "Every man owes some of his time to the upbuilding of the profession to which he belongs." What more appropriate repayment can be made to the profession which has given so much to each of us, than to interest and encourage others to enter any of the many fields of dietetics?

Connecticut. In March 1960, the Northern Connecticut Dietetic Association held a Career Guidance Conference and Dinner at Hartford Hospital for twenty-two junior and senior guidance, science, and home economics teachers. Although the response from 125 invitations sent out was disappointing, the enthusiasm and interest of those attending more than made up for the lack of numbers. While invitations were originally mailed only to women in guidance departments, three men attended as "substitutes," and were among the most enthusiastic at the meeting. One remarked that in his nine years as a guidance teacher, he had never before heard of the profession of dietetics.

The Association felt that this contact was so worth while that a similar conference was presented this spring by the Southern Connecticut Dietetic Association, at Grace-New Haven Hospital. This time, 215 invitations were mailed, with greater response. After showing "Take a Good Look," the program theme, "Interviewing Careerists in Food Service," was carried out by discussion of: (a) careers in food service which require no formal schooling (food service workers, male and female, dietitian's assistants); (b) careers which require some specialized training (food service supervisor, baker, chef); and (c) the career of dietitian, with emphasis on the education required, desirable qualities of character, and over-all duties. This period included short presentations by six members representing as many different areas of dietetics. A tour of the dietary department followed; then *View from the Mountain* was shown, after which the program concluded with a dinner served by the host hospital. It is hoped that this increasingly effective career guidance activity can become an annual event.

Illinois. The Rock River Valley Dietetic Association has worked on a home economics pilot study, sponsored jointly by the Illinois Dietetic, Home Economics, Home Advisors Associations and the Home Economists in Business. It consisted of a series of programs surveying career opportun-

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IN THE SPOTLIGHT

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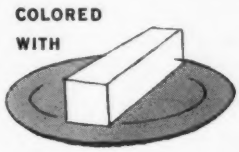

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ities in the home economics fields for local (Rockford, Illinois) junior and senior high school students. The ten-session survey program included three visits to Chicago for first-hand knowledge of varied opportunities offered, tours of Milwaukee and Rockford institutions and services, and discussion meetings, together with the judging of poster and essay contests, career speakers and film presentations. All combined to give a well rounded picture of opportunities and responsibilities of careers in home economics fields.

Kansas. The Topeka Dietetic Association cooperated with the local Home Economics Association on a career guidance project. Five posters, 36 by 36, were prepared on careers in nutrition. These have been exhibited in rotation in junior and senior high schools in the area every week.

Maine. As reported in March, the Maine Dietetic Association presented a two-part Health Hilites program over WACM-TV, Aroostook County. Since this station is 200 mi. north of the nearest other television station, there is a lack of selectivity in program tuning, and everyone in the area with a television set was exposed to "Dietetics as a Career" on these occasions. From the many questions submitted by listeners, a list of those most frequently asked has been compiled and is passed along here as helpful information for others who may plan similar presentations.

(a) What is a qualified dietitian? What is the difference between a dietitian, a nutritionist, and a food service manager?

(b) What are the high school requirements necessary for the study of dietetics? In college, do you take a regular home economics course or is there a special course for dietetics?

(c) After graduation, are there any certification requirements?

(d) What does a dietitian in a hospital do? What other job opportunities are there for a qualified dietitian?

(e) Is there a large demand for qualified dietitians? What are the beginning salaries for a qualified dietitian in this area? What are the chances for advancement in the field?

(f) What is The American Dietetic Association? How does one obtain membership?

(g) What is an internship? What does a hospital intern do? What does a nutrition clinic intern do?

(h) Are there many men working in the field of dietetics?

(i) What are the chances of obtaining a scholarship in dietetics? What satisfactions does one get from this career? If a person is interested in the study of food, would you recommend dietetics or some other field?

Pennsylvania. Several members of the Philadelphia Dietetic Association have been working with the Home Economics Division of the School District of Philadelphia toward the goal of producing a film depicting the many fields open in home economics, which can be used for career guidance.

Although this is not the year when Pennsylvania is to receive a DuBois scholarship award, the regional salesmen for this state are so "sold" on dietetics as a profession that among themselves, they voluntarily contributed an amount equal to the usual award. Presentation of the check was made by the Pennsylvania Regional Sales Manager at the state association's annual meeting.

Public Relations in the States

By HELEN G. INGERSON

A.D.A. Public Relations Chairman

Texas. The Dallas Dietetic Association has used educational television to present nutrition information. Three closed-circuit shows on elementary nutrition were presented for the first, fourth, and fifth grades of Richardson School. On Channel 13, which can be seen for a 50-mi. radius, one member spoke on feeding the aged, a panel presented basic principles of

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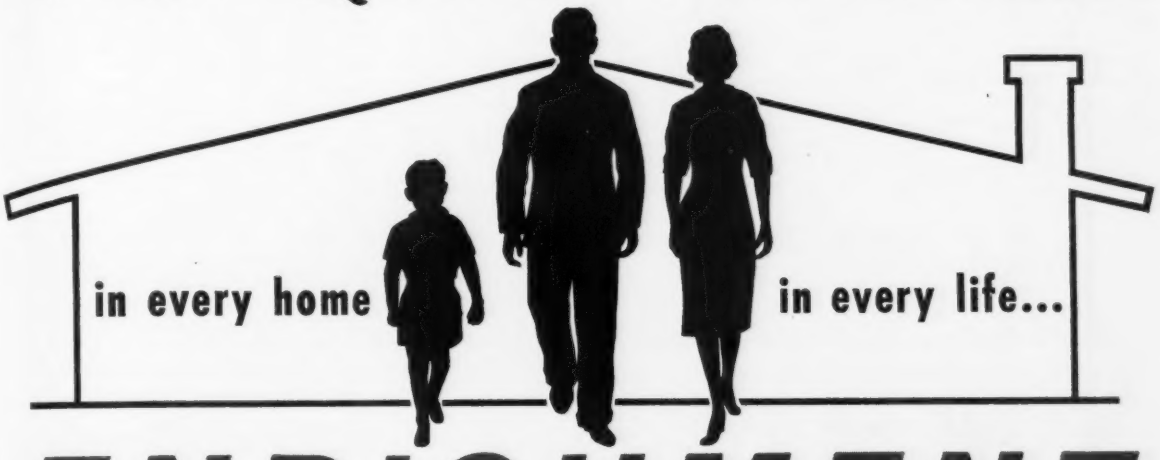

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*Sebrell, W. H., Jr. "20 Years of Enrichment." An address delivered at the Twentieth Anniversary of Bread Enrichment Meeting. New York City: February 27, 1961

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nutrition, and three members did a program on food facts and fallacies.

The Central Texas Dietetic Association has developed lantern slides to help teach nutrition to patients in a clever and interesting manner.

We have had wonderful reports from the South Texas Dietetic Association describing a most successful, and the first, "Good Nutrition Week" (April 17 to 22) proclaimed by the Mayor of Houston. The results of the dietitians' activities are so tremendous and far reaching that many of the details are included here. They started by setting up three goals: (a) to acquaint the public with the tools of good nutrition, (b) to introduce accurate data, and (c) to alert other groups that the dietitians were available for programs and discussions. They next established the slogan: "Your Key to a Healthy, Happy Life —Good Nutrition." Hundreds of organizations (PTA groups, hospitals, radio stations, meat and lamb councils, chain grocery stores, dairies, bakeries, board of education, clubs, professional organizations and societies, health department, utility companies, and others) were informed of the proclamation and the significance of the week and were given suggestions as to how they could support the week in their work.

There was excellent newspaper coverage—eighteen articles in six newspapers during the week; two articles in another newspaper the following week; and the beginning of a series of menus in another. Many included pictures. There were spot announcements and interviews on radio and television, and exhibits in five different downtown stores, newspaper or bank windows.

Grocery stores and insurance companies announced the week on their marquees and some grocers made posters. The Association had attractive two-tone table tents (3 by 5 in.) prepared. These were used in restaurants, school lunchrooms, and industrial and hospital cafeterias. One side read: "Good Nutrition, Your Key to a Healthy, Happy Life; South Texas Dietetic Association." The other side read: "Road to Good Health" and listed the four food groups under, "Choose Your Food from These Four Groups."

During the week several schools displayed the poster, "Foodway to Follow." At the suggestion of dietitians, students in other schools prepared their own posters depicting the four food groups and normal nutrition. Lectures were also given in some schools during the week. A church asked for posters for use in Sunday School classes.

Dietitians prepared exhibits within their own institutions. Two movies, "You and Your Food" and "Losing to Win," were shown. Lectures were given to some of the personnel within the hospital units. Materials were available for employees, hospital visitors, and cafeteria patrons. Two campuses had displays and materials available to the students. Posters were printed with the picture of a dietitian recommending that one eat from the four food groups—with the groups being listed. These posters were made available for display to the areas where dietitians were employed.

The South Texas Dietetic Association feels that this week served as a nucleus for further community nutrition work. As a result, they have already been requested to help Boy and Girl Scout nutrition programs, to develop a series of radio programs, and to give workshops and talks for several other groups. The Association was most appreciative to the Texas Gulf Bakers' Council for the table tents and the "Foodway to Follow" posters, as well as their suggestions and help in making new contacts in the food industry.

Tennessee. The Knoxville Area Dietetic Association had several special events to highlight Dietetics Day, February 10, including the showing on two late television news programs of dietitians watching the Mayor sign the proclamation. The revised Diet Manual compiled by joint committees of the Knoxville Area Dietetic Association and Knoxville Academy of Medicine was just "off the press" and

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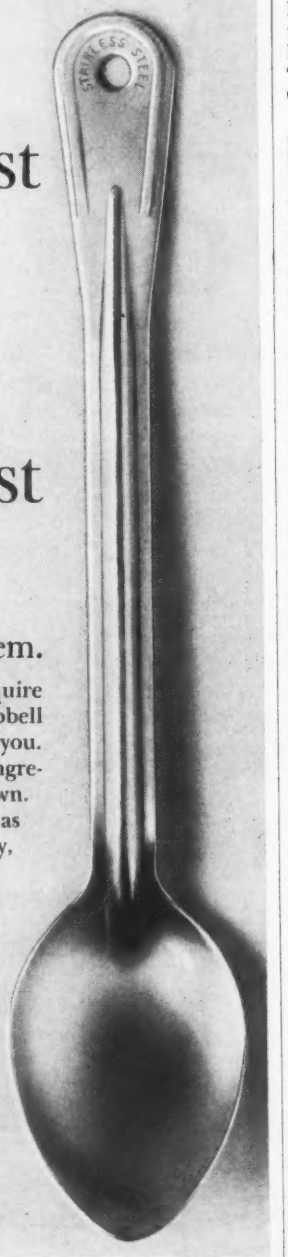

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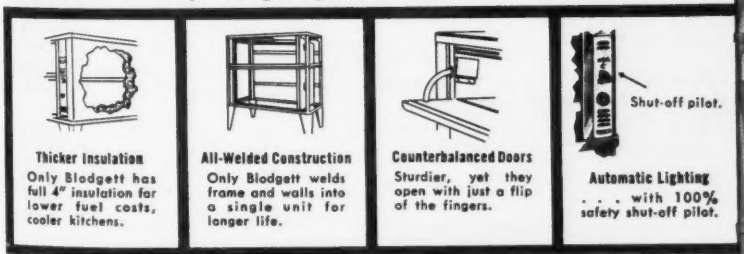

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was featured in five store window displays. The manual, along with information on dietetics as a career and sleeve emblems, was coordinated with uniform displays. A department store gave a tea in honor of the area dietitians and a local florist presented each dietitian attending with a rose for her contribution to her profession and the community.

There were several television and radio programs, newspaper stories, and over a hundred attended a hospital open house. The local radio station which featured spot announcements on food facts and fallacies recorded by area dietitians will continue to use them throughout the year.

Association Activities

Canadian Dietetic Association. J. June Stein, A.D.A. Community Nutrition Chairman, was our official representative at the Canadian Dietetic Association, June 13 to 15, in Vancouver, British Columbia. Miss Stein brought greetings from our Association at the banquet.

National Council on the Aging. As our official representative, Nelda Ross Larsson attended the Third Annual Conference of Voluntary National Organizations of the National Council on the Aging, April 24 and 25. The theme was "Changing the Public Image of the Aging." The objectives of the conference were:

(a) To help national organizations more effectively utilize their influence and resources to overcome negative community attitudes and to create a climate conducive to the well-being of people as they grow older.

(b) To work toward the establishment of an on-going voluntary mechanism to further more effective cooperative effort on a national level on behalf of older people.

The Honorable Abraham Ribicoff, Secretary of Health, Education, and Welfare, as keynote speaker, discussed the Administration's projected program for older people. He considered Social Security, retirement age, and prepaid health care. Plans for housing the aged are in process. Education was stressed for employment, training, and retraining, and it was emphasized that services for the aging should be developed at local levels.

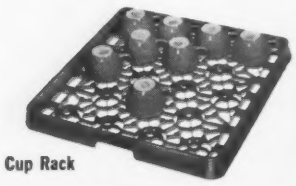
A panel discussed four images of the aging: private image (self-respect), public image, divine image, and graven or false image.

Workshops considered "An Intensive Look at Ways National Organizations Can Change the Public Image." Dr. Frederick C. Swartz indicated that the American Medical Association's Committee on Aging no longer uses the term "geriatric" since they do not feel there are diseases of the aging. Rehabilitation has changed the concept of medicine. The importance of nutrition and exercise were mentioned.

The dinner speaker, Sidney Spector, Director, Division of Housing the Elderly, Housing and Home Finance Agency, spoke on "The Status of Legislative Proposals."

In conclusion, it was commented that "there will be creative old age, productive middle age, and happy childhood."

Dedication Program. Byrdine Tuthill, University of Missouri, gives us highlights of the dedication program of Stanley Hall of the School of Home Economics, University of Missouri, which she attended as A.D.A. representative. James H. Hilton, Ph.D., President, Iowa State University and A. June Bricker, Ph.D., Executive Secretary, American Home Economics Association, as two of the principal speakers, emphasized the need for home economics to relate more closely and quickly to changing social and economic conditions of society. Dr. Bricker stated that home economics can use its vision to strengthen changing situations. Through changing economic structures of society, new roles within the family are developing, and there will need to be new analyses of family needs. These are particularly evident in regard to the increasing population of older people in families. Our contribution to youth of families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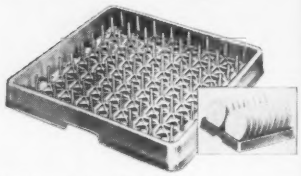
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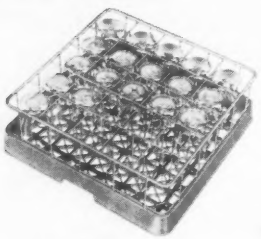
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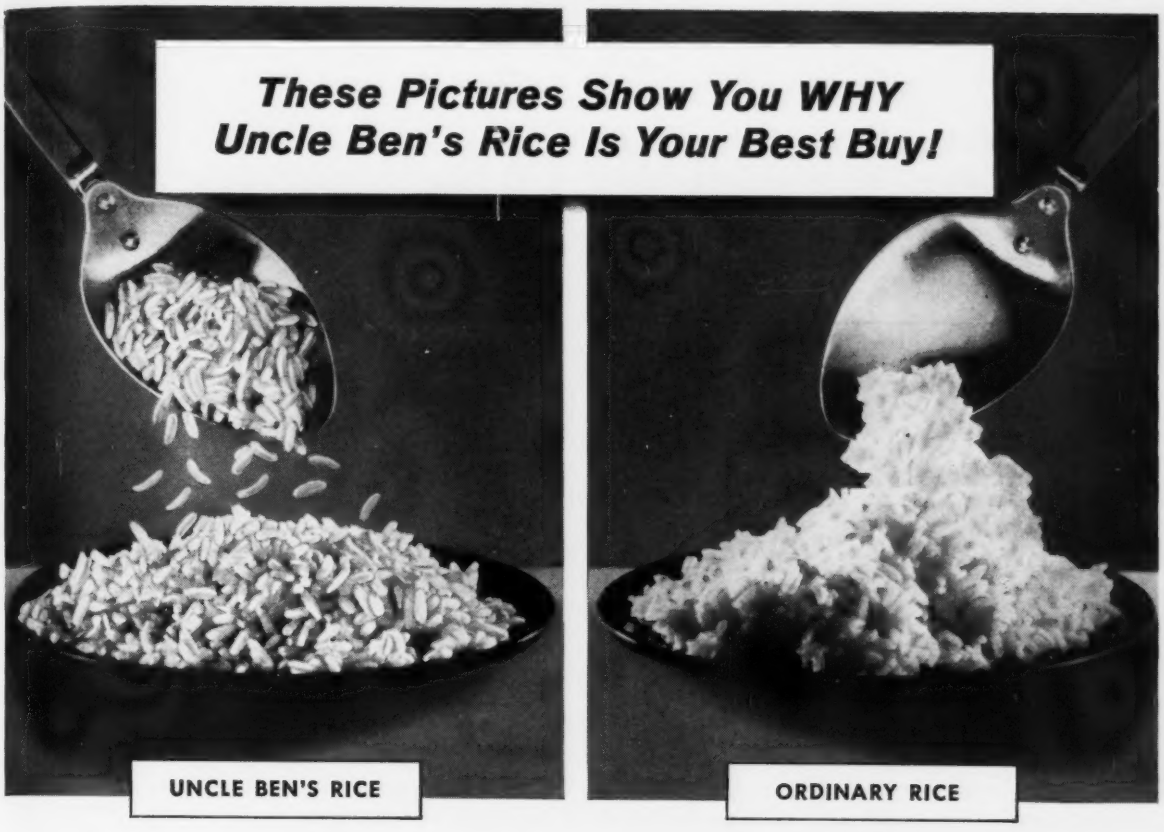

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can probably be most effective in terms of further research and education.

National Health Forum. Dorothy Kinnear, New York City, as a representative at the recent National Health Forum, gives us a few highlights on the session "Serving the Individual."

"Inter-disciplinary Understanding for Better Patient Care" was the subject discussed by a panel moderated by Michael M. Dasco, M.D., Director, Department of Physical Medicine and Rehabilitation, Goldwater Memorial Hospital, New York City. No one profession has all the answers to patient care. There is "fragmentation" of approach to diseases, but the problem should be "patient-centered." Standard nomenclature should be used.

"Communication with the Person Seeking Help" was the topic of a panel of which Mayhew Derryberry, Ph.D., Chief, Public Health Education Services, U. S. Public Health Service, Washington, D. C., served as chairman. The first requisite in communication is listening.

Among recommendations for communication it was suggested that between professions, scholarships might be provided in the health field. Groups should be invited to attend meetings of allied professions. In-service programs should be stressed in hospitals and health departments, and patients should know more about the functions of health agencies. Because of the negative activities of food faddists, there is a real need for educating the laymen in sound nutrition information.

A.D.A. Program of Work. The A.D.A. Program of Work Committee met in the Headquarters office, May 26 and 27, with Grace Shugart, Chairman, presiding. A. June Bricker, Ph.D., J. June Stein, Edith Fae Cook, and Maxine Merrick, are the other members of the Committee who attended.

A.D.A. Representatives. The Liaison Committee of A.D.A.-*National Association of Food Equipment Manufacturers* met May 23 in Chicago. Katherine E. Flack, Henriette D. Gebert, Arlene Wilson, and Ruth M. Yakel were the A.D.A. representatives. Action and comments by NAFEM on the suggestions presented by our members at the October 1960 meeting of the Liaison Committee were reviewed. The suggestion that manuals be standardized in size to 8½ by 11 in. was well received. Several industries have made Spanish translations of operating and cleaning manuals for equipment. Lists of spare parts for equipment are available from manufacturers to be used in writing specifications. Members are encouraged to be as detailed as possible in the writing of specifications. This pertains to requests concerning manuals, spare parts, installations, instructions, and use of equipment. The need for standards for capacity formulas for equipment was discussed, and the National Sanitation Foundation standards for equipment were reviewed.

The *Institutional Food Manufacturers Association* invited A.D.A. to send a representative to its Seventh Golden Plate Award Presentation Luncheon on May 22 in Chicago. Helen Corbitt, this year's recipient, was the first woman to receive this award. The selection was made by the editors of institutional trade publications. More than fifteen national organizations concerned with food industry were represented, with Ruth M. Yakel present from our Association.

Obituary

Selma Streit. The A.D.A. office has received word of the death of a long-time member, Selma Streit. Miss Streit, until her retirement in March, had been on the staff and faculty of Washington State University, Pullman, for seventeen years. At the time of retirement, she was Chairman of the Department of Institution Economics. Prior to her association with Washington State University, she had, for many years, been Business Manager, Scottish Rite Dormitory, University of Texas, Austin. Her earlier experience included teaching home

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economics, managing a high school lunchroom, and hospital dietetics. Miss Streit, who had been an A.D.A. member for some forty years, has been active in professional affairs, having served as Co-Chairman of the A.D.A.'s Placement Bureau Board and a delegate to the House of Delegates. She had also held the office of President of the Texas Dietetic Association.

News of Products and Services

A table-top coffee dispenser is offered by *S. Blickman, Inc.*, as part of its new mobile Wheelaway line. The coffee storage compartment is under the serving faucet—the faucet being the only protrusion above working height. The working area, almost completely unobstructed, may be used for setting up cups and for a cream dispenser. The unit is ready for use at any location by simply plugging into an electric outlet. The 20-gal. dispenser is filled from an urn by an extension filler hose. Two control panels are recessed on the working side: one a gauge showing the amount of coffee in the dispenser, the other an indicating control switch. Casters on the legs have foot-pressure locking devices that brake the swivel of the wheel. The stainless steel container is insulated. The same dispenser may be used for iced tea as well, by filling part of the storage tank with crushed ice and adding tea concentrate.

A new tea urn built of stainless steel and Pyrex glass has been designed by *S. Blickman, Inc.*, for counter, backbar, or waitress serving station. Tea concentrate brewed in the Pyrex glass tea holding compartment and cooled with cold water may be held for service for at least 4 hr. without flavor change. The liquid level is visible through the glass. The urns are available in 3- and 5-gal. capacities.

Foremost Dairies, Inc., in cooperation with *The Ex-Cell-O Corporation*, has developed a technique of making milk from sea water. Salt is removed by evaporation, after which the water is purified and combined with anhydrous milk fats and non-fat dry milk solids. Pasteurization, homogenization, and refrigeration follow. In the final process, the milk is packaged in ½-pt. sterile cartons. A model dairy plant employing this process is five decks deep within the hull of the SS *Hope*. It provides milk for the crew, medical personnel, patients, and children of Indonesia where Project Hope is currently engaged in its broad humanitarian program of training local medical personnel in the methods of modern medicine.

As a professional and public service, *Cereal Institute, Inc.*, has published "Fourth Report. Cholesterol as Related to Atherosclerosis. A Review of the Literature July 1959 to July 1960." The first report appeared in 1957, with a subsequent report each year thereafter. "Despite extensive research, the knowledge of the basic metabolic imbalance still eludes us," the author, Helen I. Mattill, Ph.D., states in the introduction. Dr. Mattill goes on to discuss the advances made in epidemiology by use of autopsy studies, etiology of the disease, and other factors such as stress; diet; fatty acids; therapy which meets general approval; as well as the search for tools for preclinical diagnosis. Nineteen pages of bibliography conclude the forty-page report.

DuBois Chemicals, Inc., announces three new products. "Mir-A-Kol" is a liquid dishwashing machine concentrate, giving greater cleanliness, drainability, and rinsability than older powdered formulations. "Du-Dri" is a rinse additive for dish machines which stops spotting on silver, china, and glassware in hard water as it de-limes dish machines. For safe sanitation in cold-water glass machines, "Iodet" was developed with chemically-bound iodine built into the detergent. A new handy pint bottle permits direct use from the container on glass washers with a built-in reservoir or the bottle itself may act as the reservoir. Instructions on the bottle appear upside down for readability when the bottle is in the reservoir. Iodet is also packaged in ½-gal. jugs.

The *Glassware Institute of America* has prepared a manual on glass handling and maintenance for the mass feeding operator, titled "Glasscare Guide."

Beef stew, corned beef hash, spaghetti with meat, chili, and beef tamales are now available from *Armour and Company* in No. 5 size cans designed for institutional use to serve six to eight portions. The new products are made from high quality, carefully selected foods prepared under the USDA Meat Inspection Division's regulations.

Economics Laboratory, Inc., announces the introduction of three drying agents for use as rinse additives in machine dishwashing. Studies show tableware is washed in water ranging from 20 to 1,000 p.p.m. total dissolved solids. The three rinses developed to provide clear, clean tableware whatever the water or operating conditions are: "Jet Dry" for above average; "Rinse Dry" for normal; and "New Heavy Duty Rinse Dry" for difficult conditions.

SiLite, Inc., is now producing a complete line of strong, lightweight trays. Made of fiber glass mat and polyester resins, the trays contain no inert filler material. A non-rusting plated steel ring molded into the tray provides maximum strength at corners and edges. They are acid and stain-resistant, washable in mechanical dishwashers, unaffected by detergents. Three rectangular sizes—16⅜ by 12 in.; 18 by 14 in.; and 20 by 15¼ in.—and one round, 11-in. diameter tray are offered to meet most commercial applications. Patterns are both solid colors and decorative.